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ORIGINAL ARTICLES.

NOTES ON INGUINO-SCROTAL CYSTS.

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PERHAPS there is no class of lesions, attended with an intumescence of structure, so localized and easily defined by both inspection and touch, in which, through want of a correct appreciation of the underlying pathology, so many errors are committed in diagnosis as in scrotal swellings. Cystocele of the cord, which was being regularly treated by a truss, to the injury and great discomfort of the patient, has come under my notice more than once. This, when advancing far down into the scrotum, has often been tapped and drained, under the supposition that a hydrocele existed, while, as a matter of fact, the mass was entirely outside the *tunica vaginalis*. A serous cyst had simply been evacuated.

During the month of December last, a case came under my care in which the first physician called had ordered methodical poulticing of the scrotum, for "orchitis." The second practitioner who saw the case, recognized from the grave constitutional disturbances that there was another trouble. I found extensive urinary infiltration, with impending gangrene of the scrotum. Perineal urethrotomy, with free drainage, now availed nothing, the patient sinking from blood-poisoning, some days later.[1]

In June, 1894, a letter-carrier came under my care, suffering from a great enlargement of the left testis. When first seen, the scrotum had been repeatedly painted with iodin tincture, for supposed orchitis. Examination and subsequent operation proved the case to be one of primary sarcoma of the testis, involving the spermatic cord and spreading far up into the retroperitoneal lymphatics.

In the summer of 1892, a case entered my service, which was supposed to be an abscess of the scrotum. The pouch had attained a massive volume, being red, edematous, and sensitive. A minute black speck indicated a point at which the tumor must soon burst. The constitutional symptoms were most pronounced, but what first attracted my notice was the persistent fecal vomiting, with a history that his bowels had been locked for six days, and that he had suffered the greatest agony from "cramps." Poultices over the scrotum and the free use of morphin had been the basis of treatment. A free incision exposed four inches of rotten intestine and the sac distended with feces. He died the same day.

Some years ago, a young woman came under my care, who for three days had been treated for a bubo in her right groin. Her former history was rather indefinite. She, however, had had luetic disease, hence had been freely plied with specific treatment and topical applications. But symptoms of strangulation were unequivocal. Operation revealed the trouble to be an old epiplocele, down beside which a knuckle of intestine had slipped and was nipped. Her recovery was uneventful after kelotomy.

Sero-cystic or myxomatous masses, neoplastic or adventitious, are common in the male infant along the funo-testicular tract, and are occasionally seen in the terminal segment of the unclosed diverticulum, known as Nuck's canal in the female. In either instance the tendency is to mistake them for hernia and apply a truss for the cure of an infirmity that never existed.

On the 30th of March, 1896, a boy, aged four years, was brought to me for the radical operation for hernia. On examination there were so many complex features in the case that I was somewhat undecided whether there was a simple cyst present or a cyst complicated with hernia. He had been treated off and on with a truss for two years, but latterly, the pain it provoked was so great that it had to be discarded. On free incision, a thick, tough membranous bag was reached, intimately adherent to the elements of the cord. This was enucleated, when its pedicle was traced up the inguinal canal to the inner-ring, ligated and divided. It contained sero-myxomatous material. No trace of hernia was present.

A knowledge of the diversified pathological elements which enter into the composition of these inguino-scrotal tumors, opens the way to a correct interpretation of their manifestations and diagnosis. In the young their tendency is toward spontaneous cure, though after adult years are attained, radical surgical measures, in appropriate cases, are at once the safest and most permanent in results. In order, however, that we may understand the various types of disease present, a subdivision or grouping is necessary. In making a classification of inguino-scrotal tumors or enlargements, my purpose will be rather to group them, from a clinical than a strictly anatomical or path-

[1] This case was reported in detail in *Atlanta Med. Monthly* for April, 1896.

ological standpoint, entering with any degree of fulness, only upon cystic disease and vaginal hydrocele.

1. Cystic disease of the spermatic-cord, round ligament, or testis; with hernia or without it, in the young.

2. Hydrocele—Effusion into the tunica-vaginalis testis. Cysts of epididymis and cord in adults. Simple and complicated.

3. Tumors of the testis—Infectious and malignant.

4. Scrotal enlargement from urinary infiltration.

5. Circocele and Varicocele.

The formation of cysts in the external genital structures is encountered with the greatest frequency at the two extremes of life. In the infant male we find cystic bodies in varying situations from the point where the various structures emerge at the internal ring to the point low down where the fascia spermatica spreads out, to overlap the vas deferens as it leaves the head of the epididymis. They are of variable dimensions, and firm to the touch. Cystic formations in the spermatic-cord or head of the testis are clinically allied with hydrocele, though pathologically different in many important particulars. It is important to be familiar with them, inasmuch as when they develop within the inguinal, or the canal of Nuck, they present many features similar to hernia, and when located in the lower segment of the spermatic-cord or the head of the epididymis, they may be difficult to differentiate from hydrocele. It is important to do this, because, their treatment must be widely different from hydrocele. Cystic disease in this situation, of the neoplastic variety, is of two kinds; one, the simplest and most benign, is primary and uncomplicated; the other is heterogenous in structure with formations attendant as a degenerative change in various infectious, specific, or malignant diseases of the testis or epididymis. Only the first variety can be considered here.

As they are usually painless in the beginning, it is only when they have attained considerable volume, drag on the cord, or produce painful pressure, that patients become aware of their presence. In all cases this growth commences above the testis. A knowledge of this fact would greatly aid in diagnosis, if the patient were seen early. As it is, however, no reliable information can often be derived on this point. Until recent years they were generally confounded with, and treated as hydroceles. No free dissection of them was permissible, and then nothing more than the common, unsatisfactory, and not infrequently mischievous, tapping was resorted to for their relief or cure. Like hydrocele they never, when large, undergo spontaneous cure in the adult, but produce serious degenerative effects on the genital apparatus by pressure. A close etiological relation seems to exist between these neoplasmata and those so commonly found in the female pelvic organs.

The pathology of these masses is not clear, though we may infer from their anatomical elements and their mode of development, that their occurence is attributable mainly, to two independent factors. It is probable that these distinctly different sources first led Paget to group them in separate divisions. The first he designates "sacculations," being retentions in obstructed canals or tubes, and the second, after Rokitansky and Simon, he sets down as "autogenous cysts," they being dependent on proliferation of the primary anatomical elements of which the parts are composed, and from which they grow. Virchow and Duchesne on the contrary classed them all as hygromata, or serous tumors succeeding dilated passages. Senn, makes no special classification of these formations, only grouping serous cysts of every description into two classes, within the first of which this variety would come.

The views of Davis[1] on the complex character of these strike one as sound and sensible. He says: "Their origin is more or less obscure. It is comparatively rare for them to be simple; they are more often complex and it may be difficult to say to which class they belong," and he adds most truly, that "there seems to be an exaggerated opinion prevalent of our ability by the microscope alone to determine the character of the growth." The author, with most commendable emphasis, calls into question the use of the microscope as a sole reliance in their diagnosis.

Barbè named them *Hydrocele enkystiques du Cord Spermatique.* Symme applied a somewhat similar term to those in the infant. Jourdan,[2] describes, at length, several types of these in the adult. Clements[3] of Dublin, and Moxon of England, set them down as hydrocele of the spermatic-cord; others again regard them as cystic tumors, or spermatoceles. Another author[4] describes certain cysts here of a rheumatic origin.

The pathological anatomy of these cysts has

[1] "Diseases of Male Organs of Generation." By G. G. Davis, M.D., Ashurst's Encyclop. of Surgery, vol. vii. p. 990.

[2] *British Med. Jour.*, August 28, 1878. "Notes on Peculiar Varieties of Encysted Tumors of the Spermatic Cord."

[3] *Dublin Journal of Med. Sciences and Path. Trans.*, 1893, vol. iv, p. 238.

[4] Deux Kystes Rheumatismaux du Cord Spermatique. *Jour. De l'Anat. Path.*, 1885, iv, p 233.

attracted the attention of many of our most noted investigators, though their conclusions are discordant as to their origin. Cruveilhier, in his atlas on morbid anatomy, exhibits several cases of imperfect closure of the *processus vaginalis* throughout its entire length; in some, the canal being closed in four or more places by fibrous bands. Le Dran, Meckel, Bergman, and Scarpa, report many similar dissections in the newborn. Curling, in his large experience, mentioned several similar conditions, and quotes from Gosselin and Richet descriptions of cases of serous cavities along the cord.

In the opinion of Terrillon many of these serous formations start from the remains or vestiges of serous tissue, lying latent and unabsorbed, which, later in life, through the influence of cold or irritation, furnish the fluid necessary for distention. The remains of the Wolffian bodies or the organs of Geraldes, in the neighborhood of the epididymis, produce within the scrotum a similar condition. M. Duplay,[1] in an exhaustive review on the subject, was inclined also to the view that they depended on the residuary elements of the serosa and Wolffian bodies. De Mieux,[2] later, supported this theory, somewhat modified, to agree with Cohnheim's law of neoplastic growths. According to Monod and Terrillon:[3] "Encysted hydrocele of the cord, and cysts of the cord, are those liquid or semi-liquid masses, seated along the spermatic-cord, but independent of the epididymis or testis." They are, as a rule, lined by flat epithelium, have a thin, transparent investment, and are not commonly adherent to adjacent parts. Their volume varies. These tumors are mobile and transparent, and seldom attain a considerable size. Sometimes, they are lodged entirely within the inguinal canal, and may be mistaken for herniæ, or they are more or less movable. They may be accompanied by a hernia, acquired, infantile, or congenital, or a retained testis. Routier and Gosselin[4] have recorded cases, in which blood was found in their interior, after a trauma. When complicating a hernia they occupy the most diverse relations to the viscera. Their contents differ widely in their physical, chemical, and histological characters. In some, an opalescent fluid containing spermatozoids, is evacuated. Many such cases have been reported by Liegegard, Broca, and Robin.[5] Duplay designated them: "peritoneo-funicular hydrocele;" in contradistinction to the "vagino-peritoneo-hydrocele," in which latter the fluid extends into the cavity of the tunica vaginalis.

Although the greater number of these cystomata are formed in the myxomatous elements of the cord, some few are found to spring from the epididymis, and hence, like hydrocele, begin to enlarge from below. According to Broca, Liston and Velpeau, in 1843, first discovered spermatozoids in the fluid elements of these cysts.[1] Gosselin noticed that they were the most liable to appear at that epoch in life when the normal function of the secretion began to decline, a phenomena not altogether unlike the cystic involution of the mammary gland in the female at middle life. How these tumors may originally form, or from what precise anatomical elements they first commence to grow probably must remain largely a matter of speculation. Although the clinical fact is that they are in some manner dependent on degenerative changes perhaps influenced in their incipiency and ulterior course by heredity, the constitution of the patient, or his occupation and habits.

After their growth has begun their advance is attended by all those changes in adjacent parts which we observe in the evolution and advance of any benign formation. As their walls encroach on neighboring tissues, their most vulnerable histological elements give way and disappear by absorption. Those growths arising from the epididymis, it will be observed, are often within the *tunica-vaginalis*, their presence producing a moderate serous *vaginitis-scroti* maintaining an uninterrupted pressure on the nude, defenseless testis; in which event, we may have one fluid bag within another. As the greater part of the hilum of the epididymis is lodged outside the tunica-vaginalis, when sperm-elements are found in hydrocele it has been supposed that they had become intermixed there, in consequence of a cyst of the epididymis having ruptured into the cavity of the *tunica-vaginalis*.

The origin of these growths in the epididymis has been explained variously by different authors. With some it is believed that they develop in consequence of a dilatation of the tubular coils of the epididymis. Their anatomical elements would lend some support to this theory. The inner layer of these tumors, in the greater number, is composed like the normal canals of the epididymis of stratified epithelium, and the admixture of spermatozoids would imply some direct connection

[1] "Des Collections Seroüse et Hyd. du Cord," *These de Paris*, 1865.
[2] "Etude Sur. l. hydrocele der Cord Sperm." *These de Paris*, 1876.
[3] "Maladies Du Testicule," p. 716.
[4] *Hæmatocele Vans une Kyste du Cord. Prog. Med. t.* xii, p. 533.
[5] *Gazette Des Hôpitaux*, 1864.

[1] Broca, "Traité des Tumeurs," 1866, t. ii, p. 291.

with the seminiferous ducts. Monod has made a careful study of this subject and the anatomical elements of the cystic structures. In order to determine the relation of the tumor to the epididymis, he has injected mercury of the temperature of the body directly into the gland elements, but in no instance did he find any pass into the tumor.

Follin[1] has demonstrated that the *debris* of the Wolffian body in the female is represented by the body of Rosenmuller in the male, or the so-called hydatids of Morgagni, which form a row of bud-like projections on the head of the epididymis. From the vestiges of fetal remains, in his opinion, we may expect that many of these cysts advanced in this direction, especially as the capsule is thinner in this situation. In those taking this direction—the extra-vaginal route—we will find them attaining the greatest volume.

In one of my own cases, a sailor of fifty years, I removed, preliminary to decortication, twenty-six ounces of fluid. Stanley reports one as containing 1600 grams, and Curling one, having within the sac 2000 grams. The walls of these cysts vary in thickness and, as a rule, are intimately adherent to all the elements of the spermatic-cord, especially the efferent vessels of the testis. The color and consistence of the contained fluid varies greatly. Spermatozoids are not constant. In recent, small-sized, simple cysts, the fluid is opalescent and slightly mucoid. These latter, generally contain spermatozoids; but in the larger, more chronic, which are multilocular, degenerative changes have destroyed the germ-cells and various phases of tissue metamorphosis are encountered in their contents the investing membrane and neighboring tissues. These hygromata in serous cysts of the epididymis are seldom witnessed of such volume as to be readily recognized or differentiated. Terrillon said of them, that from the standpoint of the anatomist, they were commonly seen, but clinically, they were comparatively rare. Hochenogg, Professor Albert's assistant, at Vienna, in the examination of 6000 surgical cases coming to the clinic, met with but three cases. During the three previous years antedating the period when these statistics were taken, in a larger number of patients none whatever were found.

From what can be gathered from the scattering cases reported and those whose opportunities for observing these genital cysts are fairly large, it may be affirmed that those which lie along the course of the inguinal canal, arise either through an occlusion of the *processus-vaginalis*, or a neoplastic formation. Those in the spermatic-cord are the most common. The next in order of frequency, are those which rise at the hilum of the epididymis, directly from its capsule or parenchyma, and are extra-vaginal. Those are most rare and least in volume which bud from the head of the epididymis and are lodged side by side with the testis, within the *tunica-vaginalis*.

[1] L'epididymis, *Cong. de Chir.*, 1885, p. 556.

TOO MUCH AND TOO LITTLE HAIR.[1]

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IT is possible to have too much of even a good thing, and therefore one can have too much hair, especially when that *one* is a woman. It is of facial hirsuties in women that I would speak this evening. We are not now concerned with any other form of too much hair, and will say nothing of those long beards that are some mens' pride, which they can tie in a knot, and put in their pockets, nor of those freaks of dog-faced men, nor of anomalies of hair growth as to time, such as puberal hair occurring at an early age. In the first part of my paper I shall confine myself to a study of the etiology and treatment of hirsuties in women. Then by way of contrast I shall say something about loss of hair.

General impressions are often misleading, while a study of one's case-book is instructive. It was with the wish to find out what my cases of superfluous hair in women had to teach me that I have studied the first one hundred cases occurring in my private practice. As the results were of interest to me, I venture to give them, hoping that they will not fail to be of interest to you also. The cases were taken as they came, and were in no way selected. As would naturally occur, eighty-two of the women were of the mixed race that we call American, as we have no term for a native of the United States other than this. Fourteen of them were Hebrews, though born in the United States. The Jews so rarely intermarry with the Christians that their race is comparatively pure, and worthy to be placed in a special class. Two women were Germans; one was an Irish woman; and one was a Welsh woman. Fifty-eight of the cases were in single women, and forty-two were married or widows.

In ninety-seven cases the age at which the hair first showed itself was noted. The earliest age re-

[1] Read before the Detroit Medical and Library Association, April 6, 1896.

corded was thirteen years, and there was only one who said that she was over fifty when the growth began. There were eleven cases that began at the eighteenth year, and that was the largest number for any one year. A woman passes through certain more or less well-defined periods in her life, determined by her menstrual history. My figures studied in relation to these periods are interesting. They are as follows:

Hypertrichosis began	betw.	the	13th	and	15th	year	incl.	in	3	cases.
"	"	"	15th	"	20th	"	"	"	29	"
"	"	"	20th	"	30th	"	"	"	38	"
"	"	"	30th	"	40th	"	"	"	17	"
"	"	"	40th	"	50th	"	"	"	9	"
"	"		at over		50th	"	"	"	1	case.

We thus find that in seventy of the cases the age at beginning was under thirty.

There is a general impression that there is a connection between the growth of hair on the face in women and disorders of the reproductive organs. My notes show uterine or menstrual disorders were found in but four of the married, and in but nine of the unmarried women. Of the married women ten had no children, seven had one child each, and seventeen had two or more children. As to the special symptoms pointing to disorders of the reproductive organs amenorrhea was found in two cases; dysmenorrhea in four cases; irregular menstrution in three cases; uterine displacements in two cases. The menopause had occurred in eight cases.

Of the one hundred women, sixteen were decided brunettes, and six were decided blondes. The rest were of the medium complexion, that is by far the most common.

In fifty-five cases there was a strong family tendency to hirsuties, as is shown by the following table:

A history of	facial	hirsuties	in	mother			in	14	cases.
"	"	"	"	"	"	and grandmother	"	2	"
"	"	"	"	"	"	" mater'nl aunt	"	3	"
"	"	"	"	"	"	mat. aunt and sister	"	1	"
"	"	"	"	"	"	and sisters	"		"
"	"	"	"	"	"	sisters and daughter	"	3	"
"	"	"	"	"	"	and paternal aunt	"	1	"
"	"	"	"	"	"	and others of family	"	1	"
"	"	"	"	"	"	maternal aunt	"	5	"
"	"	"	"	"	"	paternal "	"	2	"
"	"	"	"	"	"	patrnl. aunt and anc'st'rs	"	2	"
"	"	"	"	"	"	patrnl. aunt and daught'r	"	1	"
"	"	"	"	"	"	sisters of patient	"	13	"
"	"	"	"	"	"	sisters and maternl. cousin	"	1	"
"	"	"	"	"	"	women, both sides family	"	5	"

In twelve cases it was said that the patient resembled in her general physique the father. In three of these cases there was also a history of other female relatives having had facial hirsuties, leaving nine cases in which only the paternal form of heredity manifested itself. But very few of my cases showed other evidences of masculinity, such as depth of voice, or coarseness of figure, or manner, greater than was to be found in women of their own grade of life.

The upper lip was affected alone in fourteen cases. The upper lip and chin were affected at the same time in thirty-six cases. The chin was affected alone in five cases. The chin and cheeks were affected together in eight cases. The upper lip, chin, and cheeks were all affected in twenty-three cases. The hair on the whole body was unusually developed in two cases. There were coarse hairs on the chest in two cases. In the other ten cases the location of the growth was not noted. In no case was there any hair on the lower lip except a very few, usually not very coarse ones, just under the middle of the border of the hp.

The greatest number of hairs I have ever removed from one patient is 12,905 in the course of several years, the patient being a young woman who had an unusually heavy growth of hair. Of course this number is not by any means made up exclusively of new hairs, but includes many returns of hairs that had been removed. In eleven cases I have removed 1500 hairs and over, and all of these women were under thirty years of age, and the highest numbers have always been found in the patients in whom the growth began before the twentieth year.

It does not seem to me that we are justified in drawing any special inference from the fact that eighty-two per cent. of the cases were Americans. That would naturally follow because the data were gathered in an American city. It does seem to me significant that fourteen per cent. of them were Hebrews, because my practice is not especially among the Hebrews. We would expect, however, that women with the dark skin and hair of this race would have a tendency to hirsuties. Nor can we draw any inference from the civil condition of the patients. Among the fifty-eight unmarried women were a number who were so young they would hardly be expected to be married, and if these were thrown out, the number of the married and unmarried would be about the same.

It is a most striking fact that about one-third of the cases occurred before the twentieth year, and seventy per cent. of them occurred before the thirtieth year. This, it seems to me, points very strongly to the inference that the growth of facial hair in women is analogous to what occurs in men, that is, it begins at about the age of puberty and during early womanhood. It is, therefore, an inborn peculiarity, an inherent condition of the make-up of the skin, just as ichthyosis is in some people. That only ten per cent. of the cases developed after the fortieth year seems to show how comparatively little the cessation of menstruation has to do with the growth of the hair. It may well be that my statistics are as

misleading as many statistics are, and that it is rather because young women seek relief from their misfortune that the number of them is so large, than that they really are so much more prone to have hair on the face.

The number of women with disorders of the reproductive organs was no greater than would be found among any other one hundred women, only thirteen giving any account of them. Of the forty-two married women or widows, I have notes as to the child-bearing capacity in but thirty-four. I must confess that I am skeptical in regard to the inference to be drawn from a woman not having children. In these days so many women refuse to assume the responsibilities and joys of motherhood, that it is hard to say whether the childless women are so of choice or of necessity. Assuming that the women in my tables were childless of necessity, the fact that ten out of the thirty-four had no children, and seven had only one child, certainly bears out the prevalent idea that women with hirsuties are not so prolific as those who have not hirsuties. The number of brunettes was a little more than 2½ times that of the decided blondes. This sustains the prevalent idea that the darker the skin the more prone it is to the growth of hair.

It is when we come to the consideration of the family tendency to hirsuties that we have the most important etiological factor in causation. This is shown by the fact that in fifty-five per cent. of the cases the deformity was hereditary. Of these $66\frac{4}{11}$ per cent. were on the maternal side, only about 9 per cent. were on the paternal side, while $23\frac{7}{11}$ per cent. were probably also hereditary, as the deformity occurred in the sisters of the patients. If we add to this fifty-five per cent. the nine per cent. in which the patient was said to resemble the father, there being no other evidence of heredity, we have sixty-four per cent. of the cases in which heredity may fairly be regarded as the cause of the trouble. From this we are justified in concluding that hypertrichosis in women is very largely a matter of heredity, especially on the maternal side; that it has comparatively little to do with disorders of the reproductive organs; that brunettes are more prone to it than blondes; that a woman with hirsuties is a little less apt to bear children than one who has not hirsuties; and that the most frequent age for the appearance of the trouble is between the sixteenth and thirtieth year.

The upper lip is the most frequent site for the growth of hair, it showing the growth in seventy-three per cent. of the cases. The chin is a close second, with a record of seventy-two per cent., so that we may say that the lip and the chin are affected in equal degree, except that the lip alone was affected in fourteen per cent. of the cases, while the chin alone was affected in only five per cent. of the cases. The cheeks were affected in thirty-one per cent. of the cases, but were never alone the site of the growth. The whole of the usually bearded part of the face in men was affected in these women in twenty-three per cent. of the cases. Here again we find an analogy to what obtains in men in whom it is not uncommon to see a comparatively scanty growth of hair upon the cheeks, and the heaviest growth upon the lip and chin.

As to the treatment it is easily stated, there is but one method of treatment, and that is by electrolysis. It is scarcely necessary for me to describe the operation for the destruction of superfluous hair by electrolysis. It is one of the glories of American medical science that one of our physicians, Dr. Michel of St. Louis, introduced it to the world, and another of our physicians, Dr. Hardaway of St. Louis, brought it prominently before the medical profession as the means for relieving many a distressed woman of a burden heavy to be borne. Happily both of these worthy-to-be-honored men have reaped a rich reward for their ingenuity.

The question is often asked me: "Is the operation a successful one?" I always answer without any hesitation: "Yes, undoubtedly." There is no case, however bad, that cannot be permanently cured. It is simply a question of perseverence on the part of both the patient and the operator. It must always be borne in mind that it is impossible for any one to strike the hair papilla right every time, and so there will be a certain number of hairs return. As the operator grows more skilful the number of returns will become less. It is always my custom to tell my patients, when they first come to inquire about the removal of superfluous hair, that they must expect a certain number of hairs to come back. Another thing to be borne in mind is that in young women it is impossible to say when the new hairs will cease from appearing, and it is well also to tell them this, so that they will not think that all the hair that they see coming, after a series of operations, is a return of those taken out. It is this appearance of new hairs that has given rise to the notion that the operation stimulates the growth of hair. I have never seen any evidence of this. Indeed Giovannini has shown that the electrolytic action is not confined to the immediate vicinity

of the hair papilla operated on, but goes to a certain degree beyond it. This fact tends to show that the operation is rather inclined to discourage the growth of new hairs.

The best cases to work on are those in which the hair occurs late in life and is limited to only a few coarse hairs. By careful and slow work it is quite possible to destroy nearly all the hairs at the first sitting. When we have a great many hairs to destroy and the patient is naturally impatient to get the hair off as soon as possible, it is better to work faster, even if not with as much exactness, and to go over the face again and again until all are destroyed. Another question that is often asked is: Will the operation scar the face? To this may be answered that in the vast majority of cases, if the work is done carefully, no perceptible scars will be left. Almost all skins will show some small punctate scars left by previous operations if the skin is put on the stretch in a strong light. This is practically *not* scarring, as the little marks cannot be seen under ordinary conditions. There are some skins that bear the operation so well that even these small scars are not to be seen. On the other hand there are some skins that will scar, do what you will, and it is impossible to tell beforehand which sort of a skin you have to deal with. In almost all cases the upper lip will scar more readily than any other part of the face. If too strong currents are used, and these are allowed to work for too long a time; or if the attempt is made to enter a follicle for the second time at the same sitting; or if the sittings are had at too short intervals; or the hairs are taken out in too close proximity to one another; scarring may be expected. Only in one of my own cases have I made scars that were at all perceptible, and that was in the soft, fine skin of a Jewess, whose skin would scar, whatever I did. I have seen several women who have been operated on by others, in whom the scarring was disfiguring. But as a rule, this result is due to bad technic, and is not a reproach to the operation.

There is nothing so difficult for a man in my line of work as to follow up his cases, and to write at the end of his case-history, the final result of his work. As showing what results may be expected to follow the operation, let me briefly give you some notes from my case-book:

CASE I.—A Jewess from whom I removed nearly 8000 hairs in five months. After six weeks, when most of the hairs that were to come back had probably put in an appearance, she wrote me that she had pulled 1700 hairs. When I stopped work on her the face was by no means clear, but she was used up by her frequent journeyings to and from the city.

CASE II.—A woman of forty-four years, from whom I removed 2300 hairs. She comes to me about once a year to have a few straggling new ones removed, the tendency to hair-growth not having ceased.

CASE III.—A young woman of twenty years, from whose face I removed 6500 hairs in a long series of sittings during some four years. After a pause of five months I took out 580 hairs in another series of sittings. This left her face free of all hairs of any size. I have seen her from time to time during the five years that have elapsed since I last worked on her, and though she has not pulled a hair nor done anything to her face, no one would dream that she ever had had the heavy growth she once had, nor notice that she was the subject of hirsuties.

CASE IV.—A young woman, from the right side of whose face I removed 4800 hairs, a colleague taking about the same number from the other side. Six months after the last sitting I met her and she expressed herself as delighted with the result of the operation. Her face looked perfectly free of hair.

CASE V.—A young woman, from whose face I removed 262 hairs. Three months after I removed 32 hairs, and three months after that I took out only 9.

CASE VI.—This is the worst case that I have ever had. The patient is a young woman. She came to me in 1892. I removed, in a series of twenty-eight sittings, 2285 hairs, hardly making an impression on the growth. She went to her home for six weeks and then returned, when I took out in nine sittings 1195 hairs. After another four months 2200 hairs were removed in twenty-five sittings. Again an interval of four months, and a removal of 2745 hairs in thirty-two sittings. After an interval of five months she came again and had 995 hairs removed in ten sittings. And so on, until up to April of 1895 I had removed 11,360 hairs. Now there was a pause of six months, and another series of sittings in which some 1545 hairs were removed. During this last six months she is able to mix in company without any remarks being made, and when the last series was ended her face was in fine condition. It looks as if in one or two more series of sittings we will have the growth under easy control.

These cases will be enough to illustrate the difficulties of the work, and to show the satisfactory results arising from it.

In closing this part of my paper, I would say again that I have perfect faith in the operation, that it is a sure cure, although there are certain difficulties to contend with in attaining a cure, and that, though the operation is devoid of that brilliancy that throws a glow over the major surgical operations, it is one of the greatest gifts

of our art to that much suffering creature, woman.

TOO LITTLE HAIR.

I shall endeavor to be as brief as my subject. I shall give you no statistics, but simply state to you some things that I believe to be true. At this time I shall speak only of what is known as premature alopecia, or falling of the hair before the forty-fifth year. It must be confessed that this is a purely arbitrary division, but it is convenient. I shall say nothing of senile alopecia, for which we can do nothing; nor of alopecia areata—that is a disease of quite different nature. Nor must you take what I say in regard to treatment as applying to the reproduction of hair on a perfectly bald and atrophic piece of scalp, even though on the head of a young man. When a man with such a scalp asks us to make his hair grow, he asks too much. We cannot do anything for him. It is only of the more or less gradual, but persistent, loss of hair, that is so often seen in people who have not yet attained to middle life, that it is my intention to speak.

People lose their hair, either on account of some disease of the scalp, or on account of hereditary influences, or on account of some form of nervous or physical derangement, that interferes with its proper nutrition.

By far the most common cause of loss of hair is some disease of the scalp; and the disease of the scalp that most often causes baldness is seborrhea. This may be of either the dry or oily form. You may, if you please, call it by the name of seborrheal dermatitis or seborrheal eczema; it will make no difference with my statement or the effect of the disease. Now, when you have a well-marked seborrhea added to an equally well-marked tendency to the early loss of hair, you have a combination that is very dangerous to the hair. It is true that my highly valued friend, Dr. G. T. Elliot, believes that all, or nearly all, the cases supposed to be due to heredity are really due to a seborrhea, that caused the hair to fall in the father, as well as in the son. I cannot go as far as that, but do believe that hereditary tendencies show themselves just as much in the loss of hair at an early age as they do in so many other ills that afflict us. We have all known of families in which the hair has fallen at an early age from the heads of most of its male members, and this without any apparent disease of the scalp. A very frequent manifestation of hereditary loss of hair is seen in the receding forehead, that is a well-marked family trait. On the one hand, we see cases of seborrhea of the scalp existing for years, without alopecia, in a patient who comes of a family in which baldness is not common. On the other hand, we see cases of alopecia at a very early age, and we find a seborrhea of perhaps no great amount on the scalp. The disease of the scalp does not appear bad enough to cause the hair to fall, and inquiry brings out the fact that the patient's ancestors, with a good deal of uniformity, were bald at an early age.

Women become bald with much less frequency than men. In a recent study of my cases, I found that those women who became bald gave a history of baldness, or loss of hair in other female members of the family. If further study substantiates this, it will be another witness to hereditary influence in the production of baldness. It has been noted that women are troubled with loss of hair more often than men, but that in them the hair usually returns. So true is this that, when a woman comes to me for falling hair, unless she is growing old and shows atrophic patches of the scalp, I always feel justified in assuring her that she will not become bald. When it is a man who comes, no matter how young he may be, I never feel so assured that his hair will cease from falling or grow in again.

In women we often find anemia, chlorosis, neurasthenia, or some other form of nervous or physical debility at the bottom of the fall of the hair. We can note that the hair grows more abundant, or falls out more rapidly, with the rise and fall of the tide of nutrition in them. These conditions are not so often seen in men, but when they do occur they are just as capable of producing loss of hair.

And now, having thus briefly stated what I believe to be the underlying causes of the fall of the hair, let me state as briefly what I believe are the methods of treatment.

If there is any scaling or crusting on the scalp showing the presence of a pityriasis or seborrhea, our first duty is to address our remedies to its cure. Do not make the mistake of prescribing cantharides at once because there is falling of the hair. To some physicians, falling of the hair always suggests cantharides, just as to other physicians any skin trouble suggests arsenic. If there is much crusting, it is well to soak the scalp over night in sweet oil, with two per cent. of salicylic acid, and to wash the hair and scalp in the following morning. Then in these cases, or without the preliminary soaking in other cases, apply the chosen remedial agent. There are many who prefer resorcin, three to five per cent. in alcohol and water. I have tried this, both on

myself and my patients, and do not like it. It is, in my opinion, only fitted for those cases in which there is an oily seborrhea present. In the other forms it is apt to prove too drying to the scalp, and to increase the itching. If one tries to use a slightly oily fluid preparation of this or other drug, it is not much better. In my experience, though fluid preparations are easier to apply, they are not as much under control as pomades, and are prone to make the hair stringy and generally disagreeable.

After making trial of a great many different drugs and combinations in the treatment of the scalp, I have settled down to two formulas, namely: Sulphur cream, and Bronson's ointment. These give me such satisfaction, that I employ the one or the other in the great majority of my cases of alopecia pityrodes. My preference is for the sulphur cream. This is composed of

℞	Ceræ albæ	ʒ vii
	Ol. petrolate	℥ v
	Aquæ rosæ	ʒ ij ss
	Sodæ biborat.	gr. xxxvi
	Sulphur	ʒ vii
	Mix.	

This I use whenever I can. As after a time there is a slight odor of sulphur about the head of one using this preparation, it is not well to prescribe it for physicians, or teachers, or those following any pursuit in which others are liable to detect such an odor. In such cases, and in those in which sulphur does not agree, Bronson's ointment is an elegant and efficient substitute. It is composed as follows:

℞	Hydrarg. ammon.	℈ i–ii
	Hydrarg. chlor. mitis	℈ ii–iv
	Vaselin	ʒ i
	Mix.	

It is frequently said that ointments are objectionable and that patients will not use them because they make the hair so greasy. That is quite true if one uses a thick ointment and uses it too freely. But if one of the ointments here given is used and the patient be instructed to dip the end of the finger lightly into the ointment, and then to rub the small particle of ointment thus taken, thoroughly into the scalp and not to smear it on the hair, there will be no complaint. It is always best to have the ointment put on by a second person, but if this is impracticable, then the patient must be told to lay the hair in a part and to rub the ointment into the part, and so go over the scalp. Of course this takes time but it need not be done every day. After the ointment is applied, the hair is to be brushed to spread the ointment still more. The application is to be repeated once a day; every other day; or only once or twice a week, according to the nature of the case. It is remarkable how much more comfortable the scalp feels after the use of one of these ointments. Persistently used the seborrhea will be cured in most cases. It must be borne in mind that it will probably relapse, and the patient should be so told, and instructed to keep by him the ointment so that he may attack the disease as soon it appears.

The other diseases of the scalp that tend to produce baldness are so few that I shall not speak of them now.

Apart from the treatment of the disease of the scalp that may be present, I believe that there is but one other remedy worthy to be spoken of, and that is massage. It is absurd to use so-called "hair tonics," which, in most instances, are but more or less strong solutions of cantharides. If we use this irritant strong enough to cause anything but the most fugitive effect on the scalp, we are apt to set up inflammation. And if we use weak solutions and produce only a slight and fugitive irritation, what good is it? Vaunted hair tonics make their reputations very largely in those cases of transient fall of the hair after fevers, and in women, in whom we have said that the hair is apt to fall out and to grow again. Most of these cases in time would regain the hair without any so-called "tonic." They do a certain amount of good by keeping the scalp clean, and it is probable that the rubbing of them into the scalp acts as massage does, and is an accidental good result from their use. In cases in which the hair is really falling out in a vicious way, and in most cases of premature baldness in men they are, in my judgment and experience, of little value.

Massage, on the other hand, is the model method for increasing the nutrition of the hair. It does this by increasing the flow of blood, not only in the superficial vessels but also in the deep ones. We know that the hair papillæ receive their blood-supply from the deep plexus of blood-vessels that give off little arterial twigs to them. If now we increase the amount of blood flowing through the deep vessels, we also encourage the blood-supply to the papillæ, and so stimulate the growth of hair. We also accomplish another important thing, which is the loosening of the scalp. In men who are growing bald you will find that the scalp becomes progressively more and more drawn down upon the underlying bones. An atrophy of the skin is in progress. Now the application of all the local stimulants in the world

will not cause the scalp to loosen. But massage will, and this very thing will greatly aid us in our endeavor to get the hair to grow. It may not cause new hair to grow, and it may not permanently stop the progress of the atrophy, but it will at least stay its onward course and in so much delay the appearance of baldness. Believing that this reasoning is right I have long ago adopted massage as the essential part of the treatment of all cases of loss of hair that are not evidently and without doubt due to some passing and readily curable disease of the scalp. In my own practice I make use of a skilled operator when the patient can afford to employ her. Otherwise I direct him to pinch up and roll his scalp between the fingers of his two hands. Happily theory and practice run together in this matter, and I have had the satisfaction of seeing a number of cases greatly improved by the use of massage.

Prophylaxis is what we should preach to all our patients, and especially to the parents. Those who come of weak-haired families should see to it that every disease of the scalp is promptly cared for; they should avoid using water on the hair as much as possible, contenting themselves with a shampoo once in three or four weeks; they should brush the hair systematically every morning and evening with a brush with long and not too stiff bristles; and they should rub into the scalp, from time to time, a little oil or fat. In this way they will stand the best chance of keeping their hair, in spite of any bad family history they may have. As the general health of the patient has an influence on the condition of the hair, we should try and get our patients into the best possible physical condition.

It is not necessary to speak particularly about the fall of hair after fevers or other illnesses. If the scalp is kept in good condition, the hair will in most cases be reproduced. I never advise that the hair should be cut from the head of a woman, or the scalp shaved in either sex. I do not believe that either does any good, and to a woman it is certainly a very serious matter to cut off the hair. Massage will do all that anything will do for these cases, together with the treatment of any disease of the scalp that may be present.

Medical Journals and a Chromo.—Evidences of degeneracy are beginning to appear even among medical journals. The most recent and mortifying example is presented in the advertisement of a semi-monthly journal, which offers a hundred dollar bicycle, of any make and style, *free* to the person sending before July 1, 1896, the largest number of subscriptions at $2.00 a year.

CLINICAL MEMORANDA.

GLIOMA OF THE LEFT CENTRUM OVALE, MONOPLEGIA, HEMIPLEGIA, WORD-BLINDNESS, ALEXIA, AGRAPHIA, PARTIAL APRAXIA AND COLOR-BLINDNESS; OPERATION, IMPROVEMENT.

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W. D. M., aged thirty-eight, born in Ohio, practising physician since 1882, married, living in Colorado at an altitude of about five thousand feet five years, was referred to me by Dr. Parkhill. He complained of speech disturbance and paralysis of the right leg and arm.

Father died from rheumatism, at fifty-seven years; mother is in good health. Has three brothers and four sisters, all well and strong. No consumption, mental nor nervous diseases in any of his relatives.

He has enjoyed excellent health. Has never had rheumatism, and denies any venereal disease. His habits have been excellent. As a young man he worked very hard. He has a magnificent physique, is bright and intelligent, and is said to be a good classical scholar. During the summer of 1892 he suffered from a severe attack of indigestion, which lasted six weeks and at this time he was compelled to give up work. His health was soon almost as good as before his sickness, except that he was inclined to be constipated and had to be more careful of his diet.

He dates the beginning of his present trouble from August, 1894, but his friends say that during May, June, and July of that year he was forgetful of small affairs and frequently was unusually drowsy. At times during the day, he found it almost impossible to keep awake. He worked very hard during the summer of 1894, and at one time for a period of two weeks, he obtained very little sleep. In August, 1894, he noticed that his right hand was getting weak, but he could still write nearly as well as formerly, except that he wrote more slowly and occasionally omitted words. The right hand was first affected, next the forearm and finally the upper arm and shoulder. By the middle of September, the entire right arm was completely paralyzed. Just when he ceased to be able to write he does not remember. The tendency to sleep during the day became troublesome in August, so that he found it impossible to keep awake while at work in his office. Sometimes he slept heavily all night, on other occasions he found it almost impossible to get any sleep on account of restlessness. He suffered from no headache nor gastric disorder. Early in September he found difficulty in talking as he would get his words mixed. By the second week of that month almost every sentence that he tried to utter had one, and sometimes several, words omitted.

His speech, however, was understood by others. He recognized his mistakes and would laugh at his inability to say what he wanted to say. He kept at his work, but had to dictate his prescriptions until October 20th. The next day he found that he was totally unable to say what he desired to have written, and on trying to read he was unable to do it. He could pick out a word or two in a sentence and understand them. He had no difficulty in comprehending what others said to him.

October 23d, he started for Galveston, Tex. His right arm was completely paralyzed. He could not say anything except "yes" and "no" and these were often used wrongly. His only symptoms when he left Denver for Texas were paralysis of the right arm and speech disturbance. During the journey there, extending over a period of three days, his right leg became very weak, so that he was unable to dorsally flex the right foot to its normal extent, and soon was forced to drag the right foot in walking. The whole limb felt cold and "dead." During November and December, his leg was worse, but arm and speech remained about the same. Some time in November he began to have great difficulty in dressing himself, and would at times put his clothes on with the inner side outward, reverse his shoes, and get his vest on over his coat. In December, 1894, the right shoulder, arm, and hand became hyperalgesic to such an extent that the least rough usage of these parts caused intense suffering. This condition remained about three months, then these parts felt cold and numb. During his stay in Texas he suffered for two weeks from severe headache. With this exception there had been no headache before he consulted me. The difficulty in dressing himself became so marked that his wife joined him January 10, 1895. Soon after that time he began gradually to improve, and a month or so later he could raise his right hand to his head. walk fairly well and utter a few simple words. In March, 1895, he walked eight miles one day. During that month he traveled alone from Galveston to Iowa, where he remained until May 1, 1895, and slowly improved. On his return to Colorado he could utter the principal words of a sentence, and at times could make himself understood. He employed and understood gestures. He could not use his right hand at all, but he could raise this hand to his head. His right leg had almost completely recovered. The only trouble observed was a tendency to let the front of the foot fall in walking. He learned to ride a bicycle and rode long distances without much difficulty. During June his speech became much worse and he had to give up riding the bicycle on account of the weakness of the right leg. From December, 1894, to June, 1895, he felt dazed.

At present he feels quite well, but has little power of endurance. Is unable to form sentences or to write. He understands everything said to him and can count money. His memory is good. He can sing all the tunes that he knows, and can repeat, in a fair manner, short verses of poetry or a few lines of prose learned when he was a child. There is no vomiting, dizziness, headaches, or convulsions. He complains of no disturbance of the special senses, but thinks his taste was blunted last winter. His physical condition in regard to muscular development and the presence of fat seems excellent, although he is ten pounds lighter than he was before the beginning of his present trouble. He has a dazed and confused feeling when he gets tired. He sleeps well and does not get drowsy during the day as he did a year ago. When he is in the recumbent posture he talks better than he does when he is sitting or standing.

July 12, 1895. Gait is slow and halting. He drags the right foot and the toe of the shoe is greatly worn as the result. There is no distinct ataxia, besides a little jerky and uneven movements of the muscles on voluntary motion, in the leg, arm, or trunk muscles. If there is any ataxia of the right arm it cannot be distinguished, as its muscles are so nearly paralyzed.

Muscular Power.—Right leg, plantar flexion fairly strong; dorsal flexion very weak, and he is unable to bring the foot at right angles with the tibia. There is a slight contracture of the plantar flexors. Knee and hip muscles are weaker than those of the left leg, but still are fairly strong. Left leg muscles normal. Arms: Dyn. R. 18; L. 166. There are flexor contractures of all the fingers of the right hand, upon the hand, of the hand upon the forearm, of the latter upon the upper arm, with quite firm adductor contractures of the upper arm against the chest. The contractures of all the muscles can be overcome by force without giving rise to pain, except those that adduct the arm. The tongue deviates slightly to the right in extreme protrusion, but not if only moderately protruded. The right lower side of the face is paretic, so that voluntary motion is lessened, but as seen in smiling, emotional motion is not perceptibly affected.

The muscles of the thenar eminence and the interossei muscle of the right hand are the only ones that present a wasted appearance. These are considerably atrophied, but respond about normally to the faradic current.

Reflexes.—Knee-jerks; R., enormously exaggerated; L., considerably increased over the normal. Both influenced by reinforcing. Ankle-clonus: R., present; L., absent. Tendo-Achillis: R., exaggerated, with marked clonus; L., increased. Plantar absent. Cremaster: R., absent; L., well marked. Abdominal reflexes absent. Extensors of forearms: R., greatly exaggerated; L., about normal. Biceps: R., exaggerated; L., slightly increased. Triceps about the same as the biceps. Deltoid: R., well marked; L., absent. Pectoralis major: R., pronounced; L., absent. Masseter absent. Pharyngeal and iris reflexes present. Sensory phenomena: Right side. Tactile sense is present throughout this side, except on the distal portions of the fingers, where a camel-hair pencil cannot be perceived, even when it is in motion. Throughout this side, but more marked in the distal portions of the leg and arm the sense of touch is blunted. Localization is perverted and lessened everywhere, and almost completely lost on neck, trunk, arm, and leg. When the right hand and foot are touched he not infrequently refers the impression to the corresponding part on the left side. Temperature sense is lessened in face and nearly absent in parts below the face. Pain sense acute throughout the entire side. Posture sense apparently present, although

his speech difficulty makes it impossible to be absolutely certain in regard to this point. Muscular sense absent. Pressure sense uncertain. Joint sense seems to be present. All general sensory phenomena normal in left side. Smell and taste present and equal. Hearing; watch, R., 2/3; L., 2/3; tuning fork test not reliable, and he gets excited and confused in trying to understand what I want, and in endeavoring to make me understand his impressions.

Eyes.—Vision: R., 20/30; L., 20/30; fields normal; all the external ocular muscles act well; pupils equal in size and respond readily to light and accommodation. Fundi normal.

Mental Condition.—Early in the examination his mind appeared quite clear, but as soon as he became fatigued he at once showed evidence of mental confusion. Further examination was deferred until he was rested.

Speech.—Most of the objects that he sees he recognizes at once, but those less familiar to him seem to confuse him. When objects are presented to him by hearing, taste, or smell, he recognizes the familiar ones as readily as when he sees them. On the right side tactile sense is too dull to enable him to recognize objects by feeling them. On the left side certain qualities are readily appreciated by tactile sense.

He appears to know the use of all familiar objects, so far as he is tested. He is unable to recall the spoken names of objects presented to him through any of the senses, but for most familiar objects he recognizes the name of each when it is repeated. Not infrequently, however, especially if he is a little fatigued, he becomes confused about the names of objects that are very familiar. There is a condition of verbal amnesia for the names of familiar objects and probably apraxia for those less familiar. When he is blindfolded and called by his wife, he smiles and says, "That's all right, but I can't say it, no." He means that he knows who is calling him but he cannot recall her name.

He understands sounds other than speech and speech and music. He is very fond of music and is said to have been quite proficient in it. He has no difficulty in singing a familiar tune if his wife will lead, but he cannot be gotten to start and sing a tune unassisted. He promptly calls to mind the objects named and points them out. He has no difficulty in recognizing and pronouncing a word spelled aloud, and he can call up mentally the sound of a note, figure, letter, or word.

He is unable to recognize a note, rarely a letter, but occasionally he recognizes and even calls the names of some figures. He is totally unable to understand most printed and written words. He recognizes his own name, points to himself and says, "that all right." He is unable to read printing, writing, or music, either aloud or inaudibly.

In a few instances only can he recall an object, the name of which is seen. This power is retained for a few of the most familiar objects, the names of which are short, such as dog, cat, rat, book, longer names of equally familiar objects give him no idea of the object, *e.g.*, matchbox, penknife, handkerchief. Less familiar objects with short names are not recalled by seeing their names, *e.g.*, parrot, grouse, quail.

On testing his power to write voluntarily, his name fairly well written with his left hand, is the only result. After he writes his name at the first attempt, I tell him to write something else. He hesitates a while, and again writes his name. This is repeated several times. He cannot write at dictation. He copies fairly well with his left hand, the right being completely paralyzed, but the copy is made mechanically, writing appearing as script and printing as printing in the copy. Each letter received the degree of shading found in the original. He cannot write the names of any objects presented to him by any of the special senses, and does not know what he has written when he copies, except it be his own name. He can write his name voluntarily, and at dictation, and can read it when written by himself, by another person or when printed.

Generally he does not seem to be able to recognize a letter or figure when his left index finger or hand is made to trace it, but sometimes he would say, "all right," meaning he knew, but on questioning him if he were sure, he would wave his hand in front of his face, meaning that he was confused or uncertain.

In testing his power to call up mentally the appearance of an object, a figure, note, letter, or word, it is impossible to determine accurately the extent of the defect, as he sometimes says "no" when he means "yes," and *vice versa*. He does not seem to have any difficulty in mentally calling up the appearance of objects, but for those of figures, notes, letters, and words there is a grave defect.

Voluntary speech is much impaired. If he is asked to say something he will simply say "It's all right," then smile at his failure, or look vexed and say "Oh pshaw!" At times he endeavors to make his wants known by speech. He will utter one or two of the principal words of a sentence, make a few gestures and look anxiously for some one to complete the sentence for him. If the wrong word is supplied he immediately rejects it, but when the right one is suggested he accepts it with an approving smile. The defect in voluntary speech is due to verbal amnesia.

He can repeat long and difficult sentences after another if one word is uttered and he is allowed to repeat it before the second one is spoken. If several words of a sentence are uttered he will say one or two of the principal words, but will leave out the articles, pronouns and adjectives, etc. The defect in repeating words after another appears to be due to his inability to remember more than one or two words at a time. If he is asked to repeat a word over several times and told to try and remember it, five minutes later it is found that he has entirely forgotten it.

He recognizes many, but probably not all, of his mistakes in speaking or writing, but is powerless to correct them. If his mistakes in speech are corrected for him, he recognizes and appreciates it. If his mistakes in writing are corrected for him, he does not recognize it, but accepts it by saying "Don't," or "Don't know," or "All right."

The patient has no difficulty propositionizing or thinking in speech. There is no special difficulty with one

part of speech more than another. His memory for nouns or the principal words of a sentence is better than for the less important words. He understands and employs gesture expression in speech.

He cannot read figures or calculate, neither can he count in numbers. He recognizes money and succeeds in making change. He cannot play a game of cards.

All the internal organs, except the brain, were apparently normal.

After completing the examination I concluded that the doctor was suffering from tumor of the brain, which was large and rather diffuse in character, and that it was situated in the left cerebrum, subcortical, at least in its early stage, to the angular and Rolandic regions. I advised as the only hope, an early operation for its removal, but requested him to go to the St. Luke's Hospital and let me study his case daily for a while before submitting to an operation. He accepted my diagnosis without hesitation, and gave me to understand, aided by his wife in communicating his wishes to me. that he would follow my advice to the letter.

His wife further stated that her husband had been convinced for some time that he was suffering from tumor of the brain and had desired to have it removed, but physicians and relatives had opposed such a procedure.

He entered the St. Luke's Hospital, July 13, 1895.

Careful temperature observation of the heat of the mouth and the two axillæ were made several times each day, together with a record of the pulse and respiration. I desire, in this connection, to acknowledge my indebtedness to the intelligent coöperation of the pupil nurses in the training school of the Hospital, for the careful and efficient manner in which they made observations for me. I personally made several comparative surface temperature observations of the head on several different occasions, and from time to time verified the accuracy of the axillary and mouth temperatures taken by the nurses. In all the temperature observations the Fahrenheit scale was used. July 13, 7 P.M. axillary temperature, R., 98.2°; L., 98.2°; P., 78; R., 22. Head: temp., temporal; R., 94.8°; L., 95.3°.

July 14, 7 A.M. the axillary temperature was 97.3° and practically the same on each side; pulse and respiration about the same. It was observed that he got his shoes changed in putting them on, and he did not seem to be able to correct his mistake without the assistance of the nurse. At noon, temperature, axillary: R., 97.2°; L., 97.3°; mouth, 97.8°; P., 68; R., 20. Head temp.: Temporal: R., 96.2°; L., 96.6°. Mid-Rolandic: R., 96.1°; L., 96.5°. Parietal eminence: R., 96°; L., 96.2°. During the remainder of the day the record was practically the same.

July 16, 6.30 A.M.: temp. mouth: 97.2°; axillary: R., 96.6°; L., 96.8°. Pulse and respiration unchanged. It was observed on that day that the fields in the right lower quadrant of each eye were a little contracted.

During the next four days temperature was not above normal.

July 18, the following notes were made. "All the movements of the right foot and leg are fairly strong, but they are slow and awkward, especially at the ankle. Right shoulder movements are strong, but these also are slow and awkward. He cannot rotate the right forearm, move the thumb or any one finger of this side separately. Thumb remains almost motionless, even when he attempts to move it in association with the fingers of the hand, He can slightly flex the fingers of the right hand, when all the fingers are allowed to move at the same time, but it requires an extraordinary effort on his part to do this, and it is attended by movements of the right elbow and shoulder, and flexor contraction of the fingers of the left hand. Right foot and hand are cool and dark from venous stasis.

The Rolandic region, the greater portion of the parietal lobe, especially the inferior parietal lobe and the angular gyrus of the left side, all seemed to be involved by the lesion. It was thought that a trephine opening through the skull just below the parietal eminence would expose the center of the morbid process, which was thought to be a tumor. The operation and surgical aspect of the case will be found described by Dr. Parkhill.

After I had satisfied myself that the patient was suffering from some organic brain lesion and not from a mere hysterical or functional condition, the further differential diagnosis seemed to lie between a vascular lesion and abscess or tumor.

The absence in the history of the case of all evidence of apoplectic or apoplectiform symptoms inclined me to regard the case of non-vascular origin. The gradual onset of the symptoms beginning in the right hand, later affecting the forearm, upper arm, and shoulder, and finally involving the leg of the same side, is contrary to what we find to result from vascular lesions. A small area of softening may take place from the occlusion of small vessels and later by the occlusion of other vessels, the area of softening may extend and involve adjacent centers to those first affected, but in such cases there is a history of slight apoplectic attacks.

There was no detectable cause for abscess of the brain. Besides when a cerebral abscess becomes extensive enough to produce hemiplegia, the brain function is so interfered with that life, as a rule, is prolonged only for a few weeks at most, and generally only for a few days. Decided improvement in such cases rarely, if ever, takes place, and if it should occur, it would not be maintained over a period of months.

I was forced to the conclusion that I had a tumor to deal with. Could the symptoms be accounted for by the presence of a tumor?

A tumor in the centrum ovale, in which intracranial pressure is not much increased, may be unattended by optic neuritis, headache, nausea, vomiting, vertigo, and convulsions, and its presence may be suspected only when fibers of the corona radiata are involved, the connection of which is with more or less definitely known centers of the cerebral cortex. The gradual development of the symptoms, beginning in the distal portion of a limb and extending toward the body is a common occurrence in intracranial tumors, situated in the cortex or immediately below it. Rapid development of symptoms, after the dis-

ease has existed for some time, followed by periods of weeks or months during which the disease does not advance, but may retrograde considerably, occurs in some vascular growths, especially of the sarcomatous and gliomatous varieties. There did not seem to be any symptoms that could not be accounted for by the presence of a growth in the centrum ovale. The history of the case indicated that the growth was a glioma or sarcoma.

THE SURGICAL ASPECT OF THE CASE.

BY DR. PARKHILL.

On July 19, 1895, preparation was begun for the surgical side of the above case. The scalp was shaved, measured, and the markings made permanent by nitrate of silver solution. The scalp was then scrubbed with soap and water, with ether, and finally with a solution of mercuric chlorid. Dressings wrung out of these mercurial solutions were then applied, to be left until the time of operation. He was given a purgative of epsom salt on the evening of the 19th.

The operation was begun at 11.30 on the morning of July 20th. The markings of the scalp were transferred to the bone by the Parkhill skull marker. The scalp was then raised and a button of bone was removed just posterior to the arm center in the left Rolandic region. This opening was enlarged with rongeurs, until it had a diameter of about an inch and a half. The bone proved to be quite vascular and hard and had about the normal thickness. The dura was then opened by a crucial incision. The underlying membranes seemed normal. There was no pulsation and the brain was much more firm and resistent to the touch than normal. The exposed surface was of a dirty, yellowish color. It then became apparent that the tumor had a greater area than the bony opening, so this was enlarged until it had a diameter of about two and a half inches, The membranes were also opened to a corresponding degree. The tumor was cut away piece-meal, with a sharp Volkman spoon. It was quite firm and tough. The yellowish discoloration which was perceptible on the surface was found to prevade the entire mass. Its limits were made out only by lessened resistence to the instrument and a change to normal color. Some embarrassment was encountered from hemorrhage, but not more than is usual in the removal of such growths and it was rapidly controlled by plugging and slight pressure, by means of sterilized gauze. This growth approximated a circle, having a diameter of about two inches and extended to a depth of about three-fourths of an inch.

The membranes were reunited with catgut, except at the most dependent point through which a small rubber drainage-tube was inserted, and this was brought out through the middle of the scalp flap. The scalp was sutured with silkworm-gut, the usual dressings applied, and the patient returned to his bed, the operation having occupied something less than an hour.

The patient exhibited considerable shock for the first few hours, his axillary temperature dropping as low as 96.8°. It had risen, however, to 98.3° at 6 P.M. He was stimulated by alcoholics and heart tonics for twenty-four hours. His recovery, from a surgical standpoint, was entirely uneventful. His temperature fourteen hours after the operation reached 100.6°, but dropped to 99.6° at the end of eighteen hours, which was never exceeded afterward.

On March 22, 1896, seven months after the patient had left the hospital following the removal of the tumor, I lifted the scalp over this area, dissected it away from the dura, and inserted a piece of gold foil the size and shape of the bony opening. This was dressed on the sixth day and found perfectly sound, and the patient was sent home.

SUBSEQUENT HISTORY OF THE CASE FROM THE STANDPOINT OF THE NEUROLOGISTS, WITH REMARKS.

BY DR. ESKRIDGE.

Angust 7, 1895, eighteen days after the operation, I first examined the patient. His condition then was nearly the same as it had been before the operation, except that the right leg, especially at the distal portion, was weaker. He could, however, read a few words and point out most objects, the names of which were spoken. The optic disks and ocular fundi were normal in appearance. The fields were well preserved, except a slight narrowing of the right lower quadrant of each eye. Central vision was good.

October 17th he was again examined. The paralysis, especially of the face and leg, were decidedly less than before the operation. He was able to count money and to make change. He did not seem to be able to recognize colors. His speech was a little better.

October 28th, at 3 A.M. he had a general convulsion. The night before he had eaten heartily of pumpkin pie and had been constipated for three days. The right hand began to jerk, he screamed and a general convulsion, involving both sides of the body occurred. The left side was less affected than the right. During the convulsion and for an hour or two after it, the soft parts were protruding through the opening in the skull and were pulsating. After his bowels had been throughly opened by an enema, he regained consciousness, the brain receded and all visible pulsation ceased.

November 19th, the doctor drove from Longmont to Denver, a distance of thirty-four miles, without being fatigued. He was much improved physically and mentally appeared clearer. His wife stated that he had been trying for some weeks to read the papers, and was frequently able to tell some things that he had read. On my testing him I found that he did not know a letter of the alphabet. While riding along the road he repeatedly pointed out objects and spoke their names, *e.g.*, "Hello, a Jersey calf." He was still able to pronounce any word that was spelled aloud for him. He was beginning to re gain some in voluntary speech, and could recall some objects, the names of which were seen. He could recall all objects, the pictures of which were seen, and often name them. He could read and pronounce the word "box" and pick out a box from several objects on the desk, yet he could not recognize a single letter employed in spelling the word. He could count money readily, but could not count by numbers. It was observed that words

called up ideas, *e.g.*, "river" he called "water"; "Paris," "France"; "Council Bluffs," "Iowa." Of late he has been able to play games, both with checkers and cards.

The muscular rigidity was very much less; the knee-jerks were nearly normal; ankle-clonus was absent; deep reflexes of right arm still very much exaggerated; he could pronate and supinate the right forearm, and raise the arm without assistance above the head. The next day he came into my office alone; I asked him where his wife was. He promptly replied "trading," meaning shopping. Dr. Charles F. Andrew, of Longmont, Col., kindly made observations from time to time for me. He found that the patient could not sing a tune unless it was started for him. In trying to whistle a tune he would get the wrong one, but would recognize his mistake. On December 20th, he still had great difficulty in recognizing colors.

January 3, 1896, Dr. Andrew found the fields of vision normal, and the central vision good. His color sense was much impaired, He could calculate and count into the hundreds. He read a number of words, but recognized only one letter of the alphabet, "a". He recognized six out of nine numbers written. During the first week of January, while his stomach was out of order, he had his second convulsion, similar in every respect to the first.

March 8, 1896, he was examined again. Muscular power in the right hand had improved a great deal. Dyn. R., 50; L., 170. Contractures and deep reflexes were lessened. He walked fairly well and was able to harness and unharness his horse. He could drive long distances without becoming fatigued. Localization sense was greatly perverted, or nearly absent throughout the right side, except in the face. Tactile sense was present, but lessened. Temperature sense was absent throughout the right side, except in the face. Cold substances were called hot, and hot substances (temperature of 120°) were scarcely felt. Pressure sense greatly lessened; joint sense present; pain sense was lessened, but not abolished. Posture and muscular senses were absent in right arm. Hearing, smell, and taste showed no change. He had improved some in speech, especially in repeating longer sentences than he had been able to do before the operation. Voluntary speech was a little better, but he was still completely letter blind, word blind, for all words except very familiar ones. He was unable to write voluntarily, and had made very little progress in learning to read.

On March 11th, he had his third convulsion.

On consultation with Dr. Parkhill, it was decided to raise the scalp and insert gold foil between it and the dura, as it was feared that adhesions had formed between these and caused the convulsions. Firm adhesions were found between the scalp and dura.

As all the convulsions have begun in the right hand, and firm adhesions were found between the dura and scalp over the center for this hand, it is probable that the insertion of the gold foil will prevent the irritation which gave rise to the initial convulsive movements.

The result in this case, although a complete cure cannot take place, is encouraging toward further and earlier operations for the removal of tumors of the brain. The tumor was thought to be quite large before the operation, but it was hoped that an encapsulated sarcoma would be found, instead of an infiltrating glioma. Had the enormous size of the tumor and its infiltrating character been known before an attempt was made to remove it, it is very probable that an operation would have been discouraged. After the operation the wife was told that there was little to be hoped for, as the tumor would in all probability return. At the end of ten months improvement still continues, and there is no evidence that the growth has returned. In such cases, even if no better results can be obtained than has been achieved in this one, the outcome fully justifies an attempt to remove the growth. A person in the patient's present condition is able to enjoy life.

REPORT OF A CASE OF LANDRY'S DISEASE.

BY R. E. LEWIS, M.D.,
OF MACOMB, ILL.

ON the morning of July 20, 1894, I was called to see Mrs. G., aged fifty-three, whose occupation was household duties. Her family history was good, most of her people living until well advanced in years.

For six months previous to the present attack she had been under great mental and physical strain, which was followed by exposure by sleeping at night where a strong current of air passed over her body, and now complained of distressing paroxysmal pains shooting down both lower limbs, beginning at the exit of the sciatic nerves, and following them to their terminations. Very slight tenderness was detected by pressure where the nerves became superficial. Aside from this the patient felt comparatively well. Her temperature was 100⅘° and pulse 85. She was put to bed and ordered phenacetin and sylicylate of sodium each grs. v every three hours. She rested well that afternoon and passed a comfortable night.

On the following morning, July 21st, I found my patient entirely free from pain, in good spirits, and expressing her desire to get out of bed, which was refused, but permission was given to sit up in bed at short intervals during the day. At this time she called my attention to a slight tingling in the right leg which she described as a vibratory sensation. Her temperature was 99⅘° and pulse 78. The phenacetin and salicylate were now discontinued and gentle friction to the limb ordered.

July 22d the general condition remained the same, appetite good, and free from pain, but now she informed me that the tingling had become noticeable in the other limb, and in getting in and out of bed she found that her limbs did not support her as usual and some assistance was necessary. This was not because of pain in the members, but because they gave way beneath her and felt heavy.

July 23d I found complete loss of motion in the right leg, with only partial motion remaining in the left. The patellar reflexes were both absent but the sensation over the limbs was normal. Her temperature at this time was 101⅘°. The appetite was good and she had no pain.

On the morning of the 24th I was called early to empty the bladder, which she had been unable to accomplish.

The urine was dark, of high specific gravity, free from albumin and sugar, but giving quite a deposit of urates and phosphates. From this time until the termination of the case there was complete retention of urine and feces. The paralysis had been gradually creeping up, and now there was complete loss of motion in both lower limbs and muscles of the trunk, so that she could neither sit up nor turn herself in bed. When propped up she would soon slide down and become doubled up. Her temperature was 101°; mind clear. The 25th was marked by a rise in the temperature to 104° and numbness and tingling now appeared in the hands, the right slightly in advance of the left. The grip in each was considerably reduced. At different times during the day the lower limbs became moist with cold perspiration.

July 26th the temperature fell to 103°, where it remained during the 26th and 27th. There was gradual progression of the paralysis in the arms, with a continuation of other conditions the same.

July 27th she showed complete loss of motion below the elbows and diminished activity above, with slight disturbance of mind.

During the 28th the mind became more disturbed and she talked incoherently. Her pulse, which at no time became rapid, was now 60, and her temperature 101⅘°. Before night motion in the upper extremities was entirely suspended, completing the paralysis of the trunk and all extremities. There were several attacks of syncope during the day and following night, but death did not ensue until 9 A.M. of the 29th, about eight days from the onset of the disease.

I report this case under the head of Landry's disease with some hesitancy, for in looking over the literature upon the subject there is found quite a diversity of opinion as to what actually constitutes the disease in question. Some authors contend that it is one form of myelitis, and others that it coincides exactly with multiple neuritis, while others do not mention it at all.

It is easily separated from acute myelitis by the complete absence of sensory and trophic disturbances almost invariably present in the latter disease, no matter how sudden the onset or how rapid the progress. The disease with which it is most apt to be confounded is multiple neuritis, and certainly they have many symptoms in common which renders a diagnosis not only difficult but sometimes impossible.

It will be noticed in the above report that quite an elevation of temperature occurred at different times during the course of the disease, which most authors refuse to accept as one of the symptoms of Landry's disease, although H. C. Wood[1] states that this may occur. Its presence gives the case the appearance of multiple neuritis, but the existence of the bulbar symptoms so constantly present in acute ascending paralysis, coming on in the regular progress of the disease seems to overbalance this point, and throw the weight of evidence in favor of the latter. At best, the differentiation is made with difficulty, and cases resembling either are worthy of being reported, that our knowledge upon the subject may become more complete.

[1] "Pepper's American Text-book of Theory and Practice."

Up to the present time no specific has been offered in the treatment of these cases, and all efforts at stopping the rapid progress of the disease seem unavailing.

The etiology is somewhat obscure, but it is strongly suspected that the malady is of bacterial origin. Possibly when this is more thoroughly demonstrated we shall have a remedy put within our reach which will prove more effectual than anything which has yet been brought forward. This is sincerely to be hoped, since, with our present armamentarium, we are practically helpless.

THERAPEUTIC NOTES.

The Treatment of Diphtheria with the Antitoxin.—VIRNEISEL (*Munchener Medicinische Wochenschrift*, 1896, No. 19, p. 456) reports the results obtained at the City Hospital of Coblentz, in the treatment of diphtheria with the antitoxin, from October, 1894, to April, 1896. During this period 158 cases came under observation, of which number 8 were given no injections—3 mild cases for control purposes, 5 cases in extremis. Among the 150 cases there were 19 deaths (12.7 per cent.); 64 cases presented grave laryngeal complications, and 5 of these were almost moribund when they came under observation. Fifteen of the 64 cases requiring tracheotomy terminated fatally—23.4 per cent.—(as compared with from 56 to 64 per cent., in previous periods). Albuminuria was observed in 67 cases, of mild degree in all but 5. Other than passing skin eruptions, unpleasant secondary effects, were not observed in any case.

For Acute Coryza.

℞	Zinci phosphidi	gr. vijss.
	Extracti belladonnæ	gr. vj.

Mix. Fiat pilulas No. xl.

S. One thrice daily, after each meal.

In case of general impairment of nutrition one grain of arsenous acid may be added to the foregoing prescription. —*Gaz. hebdom. de Méd. et de Chir.*, No. 42.

The Serotherapy of Exophthalmic Goiter.—In a case of exophthalmic goiter in a woman, thirty-two years old, GIOFFREDI (*Semaine Médicale*, 1896, No. 26, cii) observed improvement follow hypodermic injections of the blood-serum of a thyroidectomized dog presenting all of the phenomena of the cachexia strumipriva. The serum obtained with antiseptic precautions was sterilized, and had added to it .1 per cent. of cresol. In the course of forty-seven days thirty-seven injections of from .5 to 1 c. cm. each were made; and after an interval of two weeks seventeen additional injections, each of 2 c. cm., in the course of twenty days. In the course of the treatment there was almost complete cessation of the headache, the anorexia, the agitation, the trembling, diminution in the exophthalmos, improvement in the general condition, and a return of menstruation. This result, however, was but temporary, as the symptoms returned gradually upon suspension of the treatment. When the dose of the injection exceeded 1 c. cm. there occurred slight febrile reaction.

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SATURDAY, JULY 11, 1896.

INTESTINAL ISOLATION.

EISELSBERG has written an interesting review (*Nederl. Tijdsch. v. Geneeskunde*, 1896, No. 8) of this distinctly modern surgical procedure. The operation aims to separate from the alimentary tract any portion of the intestine which is irritated by, or obstructs the passage of, feces. The bowel is cut through on either side of the affected portion, and the ends sutured together, *i.e.*, a "short circuit" is made about the stricture or tumor. The latter remains *in situ* and may be treated in a variety of ways. Either end or both ends may be attached to the surface of the abdomen and a fistula be established; or one end may be sutured to the other, thus making a ring; or both ends may be closed and the isolated bowel dropped back into the abdominal cavity. Eiselsberg considers a fistula necessary to give escape to the intestinal secretion. Although the three cases in which perfect closure was made prove that sometimes the amount of secretion may be so small as to give no trouble.

No less valuable is the fact that a tumor which seems inoperable may so dwindle when it is cut off from the intestinal current that a radical cure is to be hoped for by its extirpation.

Altogether the operation has been performed thirteen times, including four cases of the author. In two of these four cases a cure was obtained; in one the result was unsatisfactory, and one died.

This operation suggests the use of a segment of intestine to close a gap in another part of the intestine. Thus, if so much of the hepatic flexure be removed that the ends cannot be brought together, it would be possible to make good the continuity of the bowel by sewing into the gap a loop of small intestine. This would make necessary three lines of circular intestinal sutures. It has never been attempted in man. But it has been successfully performed in dogs.

MANUALS OF DOMESTIC MEDICINE.

IT is with considerable regret that we learn of the publication of a new "Manual of Domestic Medicine," offered by a publishing house in New York City. It is recommended as "of service to physicians, medical students, and trained nurses." Could it be kept in the hands of these, it might at least do no harm. But it is sure to have a sale among the laity, and no doubt it was primarily intended for them. Such a publication does harm to the physician by increasing the interference with his work by some member of the family, and probably by the patient himself, and does harm to the patient by suggesting temporizing and self-prescribing.

It is difficult to surmise how a physician of experience and standing can write or compile such a work. It is an entirely unscientific and unprofessional proceeding, for it presupposes that everyone to whom the book is sold is able to make a correct diagnosis. It begs the question of the science of medicine by abolishing that fundamental essential. If everyone can name his or his neighbor's disease, and if disease can be combated by rote, of course anyone can take a book, a teaspoon, and a selection of medicines, and proceed to treat himself or his neighbor. There is undoubtedly a great deal of information, which some member of every household should possess, in order to save the patient from loss until a physician can arrive. Were the book under consideration a manual merely of such information,

we would welcome it, if it contained anything new. But it is a "Manual of Medicine, Surgery, Hygiene, Dietetics, and Nursing!"

Every physician of experience has been taught in a different and a better school than one of Domestic Medicine. It is an an insult to an educated physician to offer him such a work as the present, and no medical teacher would think of putting such a compendium in the hands of his students. "Domestic Suggestions" is not the pabulum on which medical students are fed.

Who of us has not had under his care, at some time, a harassing patient, who had "studied medicine" for a few hours, and who knew more about the human frame and medical science than his physician, in spite of the latter's years of study and experience? The writer is now in attendance upon a lady who has read some book on medicine, and who gives him points regarding proper methods of treatment daily. She informs him that "the systole of her heart is all right, but the aristole is not"; again, that no physician ever gives trional "without watching the urine all the time"; again, that she has pains through "the cervix," when there is gas in her colon, varying this statement with the assertion that "the fundus is very painful." Another patient has insisted that the physician has been wrong in his treatment of him for over six months [during which time the patient has rapidly improved], because he had decided that all that was at fault was his "duodum," which he could not locate." He has obtained his smattering of dangerous quasi-medical knowledge from such a work as the one we criticize. Without knowing the shape, position, use, or function of the "duodum," he was convinced of the diseased condition of that organ. This superficial and absurd pretense of medical information would be laughable, were it not for the fact that those who possess it compel the physician to argue, explain, and teach, a process that must be repeated every day; a process that does no good, for the ignorant one who demands and hears the explanation cannot remember enough of it to apply it properly on a later occasion. Instead of profiting by it, he invariably misquotes the physician, and thereby damages him to a certain extent.

The publication of this "Manual" is useful simply for advertising the author, or for the financial return it will secure. It can subserve no good medical purpose which could not have been accomplished in some entirely professional way.

RESUME OF RECENT PROGRESS IN SURGERY.

THE TREATMENT OF FRACTURES.

THE subject of fractures has in recent years, in this country at least, been somewhat overshadowed by the advances in operative surgery. American surgeons have, however, always manifested a keen interest in the repair of fractured limbs, and many of the most important methods for the treatment of this class of cases have been devised and perfected by them.

For the treatment of fractures of the lower extremities two new methods, or, rather, modifications of old methods, have been recently proposed in Europe and have already been employed to a considerable extent in the United States. Each of these possesses features of novelty and also of practical utility. Each is worthy of more extensive trial.

The first is the method of "massage and mobilization," which has been systematized and strongly advocated for the past six years by Lucas Championière. He claims that this method is revolutionary and paradoxical, and one absolutely new and contrary to the theory and practice of surgeons. Such terms are, however, extreme for the plan is not entirely novel though it has never before been carried into execution in such a systematic and thorough manner as is advocated by this surgeon. According to this method immobilization of the limb is avoided. Massage is begun at once—the sooner the better—and employed daily until the bones have united. The seances as a rule last fifteen to thirty minutes. At first the manipulations must be gentle, and pressure should not be made directly over the ends of the fragments. In the intervals the limb is supported merely by a flannel bandage evenly, but not tightly, applied or by sand-bags alone. Splints or other immobilizing apparatus are not employed. The claims advanced for this method are: rapid disappearance of pain and swelling, prevention of and more rapid absorption of the

edema and infiltration of the soft parts and of the effusion in the joints, preservation of muscular nutrition, and the more rapid formation of a firm callus. As a consequence the fracture is followed by but little stiffness of either muscles, ligaments, or joints, and as soon as the bone is united the function of the limb is fully restored and the patient thus saved weeks or months of pain, stiffness, and disability. In certain cases, however, the originator of this plan grants that his treatment cannot be carried out in all its details. When the mobility of the fragments is so great that there is danger of a permanent deformity, or when the ends are so sharp that manipulation is apt to produce repeated traumatisms of the soft parts, or where the vitality of the skin has been endangered on account of the severity of the injury, the use of massage should be postponed for a week or two and the limb may be even confined for a few days in splints. There can be no question but that in certain cases this plan of treatment possesses advantages over the recognized treatment by complete immobilization. For example, in fractures of the radius or of the fibula the period of inability will probably be considerably shortened. It is not, however, a safe method to employ in every case of fractured leg. The risk of bony deformity is probably increased and it is very doubtful if either the patient or surgeon will be satisfied with a crooked limb even at the expense of a shorter and an easier convalescence. In many cases this method must prove a dangerous one, and it therefore cannot be recommended for routine practice.

The other method is the so-called ambulatory plan of treatment for fractures of the lower extremity, but especially of the leg. The method is not entirely novel, for at different times it has been used by surgeons in this city, though perhaps not in the systematic manner in which it is now practised in Holland, Germany, and in our own country. Plaster-of-Paris has always been largely employed in this country and has been especially popular in New York and Boston, in which cities, indeed, its use has been for many years almost universal in the treatment of fractures of the leg. The fracture-box has happily disappeared and in most of our city hospitals is not to be found in the surgical armamentarium. According to the ambulatory plan of treatment the use of the plaster splint is carried to a still greater state of perfection. It is claimed that the patient can get out of bed a few days after the accident, and can walk at the end of the first week, with the assistance of one crutch or a cane. About twelve years ago it became the custom of several surgeons in this city to encourage their patients to get out of bed as soon as possible, and often they would be able to walk on the injured limb at the end of a week or ten days. This plan, however, which only differed in a few details from the method now called the ambulatory, seemed to have fallen into disuse, in part perhaps due to the custom in our hospitals of handing over the treatment of fractured legs to the hospital internes, many of whom have habitually enveloped the limbs in rolls of cotton underneath the plaster. The ambulatory treatment as systematized at the present day consists in the use of a plaster splint snugly applied, without the use of cotton on the leg, but with this addition: that on the sole of the foot underneath the splint is placed a pad of cotton about three-quarters of an inch thick and slightly deeper at the heel. This splint grasps the leg firmly about the bony prominences, especially at the upper part of the leg and head of the tibia. The leg thus hangs suspended to a certain extent in the splint, the greater weight being borne on the bulging part of the leg below the knee, the sole of the foot being separated from the splint by the pad of cotton. The principle is the same as that taken advantage of in the use of an artificial limb, though, of course, the avoidance of pressure at the end of the limb is less perfectly accomplished. In a few cases this splint can be applied immediately before swelling has resulted. Generally, however, this is impossible and it is then wise to delay its application for four or five days, so that it may not be rendered unserviceable by the shrinkage of the limb. The short period of confinement to bed and the preservation of muscular nutrition are the main advantages of this plan of treatment, and as a result the general condition of the patient remains good and his period of invalidism is much shortened. It is not, however, a method adapted for all cases. In a considerable number the pain is so great that the patients cannot walk; in others, the weight

of the splint or timidity prevents locomotion. In some cases the shape of the upper part of the leg prevents proper support; in others the obliquity of the fragments is such that there is considerable risk of overriding and ultimate shortening, and in still others the laceration and contusion of the soft parts is too severe to warrant the early application of the splint. Experience seems to show that the ambulatory splint can be used with distinct advantage in from thirty to forty per cent. of simple fracture of both bones of the leg and in nearly all cases of fracture of the fibula. The same principle may be occasionally employed with advantage in the treatment of fracture of the knee though, of course, the apparatus must be of a different pattern.

One fact must not be forgotten in the trial of new methods, *i.e.*, that there is no class of cases, either in surgery or medicine, where the medical attendant is liable to meet unjust criticism or suits for malpractice as in cases of fractures where a perfect result has not been obtained. Caution, therefore, should be exercised in the employment of methods which have not received the general sanction of surgical authorities.

ANDREW J. MCCOSH, M.D.

ECHOES AND NEWS.

Dr. Welch Honored.—Yale University, on the occasion of its commencement in June last, conferred the degree of LL.D. upon William H. Welch, M.D., of Johns Hopkins University. Dr. Welch is an alumnus of Yale, and richly deserves this honor at the hands of his Alma Mater.

Dr. Doremus Appointed as Representative in Paris.—Professor Charles A. Doremus of New York has been appointed by Secretary Olney to represent the United States Government at the Congress of Applied Chemistry, which meets in Paris during the present month.

The University of Michigan Popular with the Orientals.—So many Japanese have received diplomas from the University of Michigan, that they have been able to organize and maintain an alumni association in Tokio, Japan. Two Chinese girls have recently had the degree of M.D. conferred upon them by the same institution.

A Strong Stand Against Popular Advertising.—The Austin-Flint Medical Society, at a recent meeting held at Hampton, Iowa, passed a resolution demanding that editors of lay papers in that district refrain from publishing notices of surgical operations, or other news matters containing the names of physicians.

In Memory of Dr. Loomis.—A large and very handsome tablet, bearing the following inscription, has been prepared by the Commissioners of Charities, and will be placed in Bellevue Hospital, New York:

"*In Memory of Alfred Lebbeus Loomis, M.D., LL.D.*
Born October 16, 1830—Died January 23, 1895.

A man of rare attainments. He had a strong will, untiring industry, and directness of purpose. These traits, with his well-ordered and resourceful mind, made him one of the ablest of his profession, and won for him its highest honors. He made many valuable additions to medical literature, and by his unusual powers as a teacher and practitioner of medicine, compelled the admiration and confidence of all who came in contact with him. This Hospital, especially, is indebted to him for thirty-five years of faithful work. By reason of his service in its amphitheater and in its wards, he added not only to its renown as a center of medical education, but to its glory as a refuge for the sick."

A Dispute Settled.—The dissension between the Medical Staff and the Board of Managers of the Ladies' Charity and Lying-in Hospital, Liverpool, England, has been adjusted at a meeting of the subscribers and results in a complete victory for the Medical Staff. The concessions insisted upon were entire charge of all patients by the medical officer on duty and a representation of three of the medical men in the managing board.

Revised Nomenclature of Diseases.—The committee appointed in 1892 by the Royal College of Physicians of London to revise the then authorized "Nomenclature of Diseases" has just completed the task and issued a volume of more than five hundred pages. The original edition was published in 1869, its preparation having occupied nearly twelve years. The present volume is so arranged that it will be a valuable guide to uniformity of nomenclature among nearly all of the more civilized nations, but is especially useful to English-speaking countries. Each disease is given first in English then follows the corresponding Latin, French and German names. Many important changes have been made in classification. This is particularly evident in diseases of the nervous, digestive, respiratory, and integumentary systems. The section on surgical operations has also been completely revised.

Cholera at Cairo.—The deadly virulence of the present epidemic is shown by the report made on July 2d. Of 7550, the total number of cases up to that date, 6216 had been fatal. A greater mortality (eighty-two per cent.) has seldom been observed.

An Official Report.—Mr. F. E. Moore, commercial agent of the United States at Weimar has officially reported to the State Department at Washington the results of the use of diphtheria antitoxin in the several German hospitals. His statements are in full accord with those already recorded in medical periodicals.

Remarkable Immunity.—In the recent retirement by the New York Board of Health of a long-tried and faithful em-

ployee in the person of W. J. Reynolds an instance of unusual freedom from contagion is brought to light. For more than twenty-three years it has been the daily duty of this man to personally attend to the removal of the victims, either dead or alive, of every contagious disease coming under the notice of this department. He was often compelled to carry in his arms the bodies of persons in all stages of the most infectious diseases, but always with perfect immunity to himself.

The U. S. Marine Hospital Service Warned.—Surgeon-General Wyman has received recent advices relative to smallpox in Cuba, which state that there are at least one hundred cases in the city of Santiago and that many families within a short distance of the U. S. Consulate are among the afflicted. The whole Southern coast of the island is a "plague spot of smallpox."

Honored in China.—The Order of the Double Dragon, carrying the rank of Mandarin, has been conferred upon Surgeon-Major Hueston of the British Army by the Emperor of China for services rendered the wounded during the Japanese war.

The Missouri State Medical Association.—This society, at its recent annual meeting in Sedalia, Mo., elected Dr. John H. Duncan, of Kansas City, president for the ensuing year.

The Chautauqua County Medical Society.—The annual meeting of this Society will be held at the Hotel Athenæum, Chautauqua, N. Y., Tuesday, July 14th, beginning at 11 A.M.

The Northern Tri-State Medical Association.—The regular annual meeting of this Society will be held in Angola, Ind., on Tuesday, July 21st. A long list of tempting and interesting papers is on the program.

The Cyclone as an Obstetrician.—The *Tri-State Medical Journal* is authority for the statement that in the recent cyclone that swept through the West with so much destruction, a young woman who was about to become a mother was sitting in her home, happy in the hope of the approaching event. The side of the house was blown off and she was carried by the storm across the street and landed on the opposite sidewalk. She became unconscious at the time the house was struck. When she recovered consciousness in her new location, the first sound that greeted her ears was the cry of a newly-born baby under her skirts. She gathered it up and called for help, which was promptly obtained. At last accounts both mother and baby were doing well.

The Parke Memorial.—The statue of the late Surgeon Parke, who so nobly supported the Stanley expedition in Africa, is nearly completed and will be unveiled during the early autumn on Leinster Lawn, Dublin. This is the first statue of an army surgeon to be erected in the United Kingdom and a just tribute to one who "loved his fellow-man."

Dr. Ferris as Acting Superintendent.—Dr. Albert Warren Ferris has been appointed Acting Superintendent of the private retreat for the insane at Pleasantville, N. Y., established by Dr. George C. S. Choate, who died June 28th. Dr. Ferris was for over five years the assistant physician and for a time acting superintendent of Sandford Hall, a similar institution in Flushing, N. Y.

Losses of the French Army.—The London letter of the *American Practitioner and News* states that according to an official account, the deaths of French soldiers from sickness in the Madagascar campaign greatly out-numbered those from casualties. While the enemy only killed 7 and wounded 94, 6000 died from disease, and 15,000 went on the sick list. This high percentage of mortality was eclipsed in 1802, in the Jawaca expedition, for out of 60,000 men who sailed from Brest, 50,000 died from yellow fever, and of the 10,000 men left, but 300 got back to France, and then only after a lapse of seven years. The 50,000 men died of yellow fever in four months.

The Congress of Dermatology.—The third International Congress of Dermatology will meet in London, from August 4th to 8th, of this year. The general program has been published in a recent number of this Journal. There will be a museum of drawings, casts, models, naked eye-preparations, microscopic specimens, works and atlases pertaining to diseases of the skin. There will also be an exhibition of clinical cases and demonstrations of the same, at 9 A.M. and 2 P.M. of August 5th, 6th, and 7th, and at 9 A.M. of August 8th. Anyone having anything to contribute to this department should address Dr. James Galloway, 21 Queen Anne street, Cavendish square, W. There will be an exhibition of cultures and microscopical preparations of organisms connected with the skin and its diseases. Any communications in regard to this department should be addressed to H. G. Plimmer, Esq., Wunderbau, Sydenham, London. The social side of the Congress will be: 1st, an informal reception at the International Hall, Piccadilly Circus, on August 3d, from 9 to 12 P.M.; 2d, a reception by the Lord Mayor and Lady Mayoress, at the Mansion House, on August 5th, from 9 to 11 P.M.; 3d, a dinner to the foreign members, at the Hotel Cecil, on August 7th. It is advised that foreigners should arrive in London not later than Sunday, August 2d, as Monday the 3d is a public holiday. Information in regard to hotels will be furnished on application to George Pernet, Esq., 77 Upper Gloucester place, London, N. W. George Thomas Jackson, M.D., is Foreign Secretary for the United States, and will furnish detailed information on application.

Smallpox as a Race Exterminator.—The Jenner centennary at Berlin was a great success, says the *Press and Circular*. The city authorities lent for the occasion the Festsaal of the city Rathhaus, and decorated it suitably to the occasion. About three hundred medical men took part in the commemoration, among them Dr. Bosse, the Cultus Minister, the Rector of the University, the Surgeon-general of the Army, with a number of the higher officials and several members of the Reichs-Gesundheitsamt. The medical faculty were nearly all present, and there were also deputations from nearly all the medical societies of the city. Professor Virchow opened the proceedings in

the name of the Committee of Honor. He said we lived in an era of reverence for the great benefactors of mankind. Of the number of these, as regarded the number of human beings saved, Jenner stood at the head. As an ethnologist he was impelled to mention an ethnological fact in the history of protective vaccination: "*All the peoples that had not been reached by vaccination, or that had not accepted it, had disappeared from the face of the earth, destroyed by smallpox.*" In the address of Professor Gerhardt appears the following, bearing on the thorough protection of German soldiers and the very imperfect protection of another foreign army: "The war of 1870 and 1871 furnished the most brilliant proof of the protective power of vaccination. Of the one and a half million of men composing the German army only 459 died of smallpox, while in the French army, vaccinated imperfectly or not at all, 23,400 men died of the epidemic of smallpox then raging."

CORRESPONDENCE.

HYDROTHERAPY IN THE TREATMENT OF TYPHOID FEVER.

To the Editor of THE MEDICAL NEWS:

DEAR SIR:—I note that Dr. W. J. Patek of Milwaukee, in criticizing, in THE MEDICAL NEWS, June 20, 1896, my article published in the NEWS of February 8, 1896, infers that I have "based my conclusions wholly on theoretical grounds," and that I have "evidently not had the privilege of coming in direct contact with typhoid patients, before, during, and after immersion." He also intimates that I am ignorant of the technic of the Brand treatment. Now, I am pleased to have any article discussed and criticized, but I would prefer the charge of deliberate misrepresentation to the insinuation that I would express an opinion on so important a matter without careful preparation, or on false pretenses of experience.

Naturally, in the typhoid patients who have been under my personal care—not a large number, as was admitted in the first paper, but several times the average quota of one working in a healthy city with a good water supply—immersion has not been practised. By addresses and journal articles, however, I am reasonably familiar with the utterances of most of the American and foreign advocates of immersion, though I must confess that there are so many minor differences among the various immersionists that it is a little confusing to select the orthodox method. It may be *evident* that I have "not had the privilege of coming in direct contact with typhoid patients before, during, and after immersion," but the fact remains, that I have witnessed quite a number of immersions, and have had the opportunity to watch the progress of a good many cases subjected to the treatment. At one time I found the mouth temperature of three patients immediately after the bath to be subnormal, and blueness, chilliness, etc., have been frequently observed. In fact, advocates of immersion concede these symptoms, but pass them over as "esthetic objections."

My critic is quite in error in intimating that I questioned the fairness of the statistics of my honored teachers, Professor Tyson and Professor Osler. My article had no reference whatever to their reports, but alluded to the fact that statistics in general are quite apt to be misleading and that, in the case of the new treatments of typhoid, diphtheria, etc., it is possible to obtain favorable percentages by excluding even the inevitably fatal cases which would not give a fair opportunity for any treatment, but which swell the general mortality.

Dr. Patek's observations that swimming baths of a duration, frequency, and temperature, approximately equivalent to those of the Brand treatment, have a beneficial effect on healthy persons, are the reverse of my own, but are all the more valuable on this account, since it is only by weighing the opinions and experiences of different observers that the truth can be obtained. His inference that my observations were modified by the compulsory nature of the baths is entirely incorrect.

Dr. Patek thinks it an error to consider the typhoid patient as an inert mass, and emphasizes the exercise which he obtains from rubbing himself and making movements in the water. Personally, I fail to see how even a healthy man can get, within the narrow confines of a bathtub, anything comparable to the invigorating exercise of swimming, and, time for time, or temperature for temperature, my endurance in the tub is much less than in deep water. However this may be, it is nonsense to suppose that a typhoid patient can or ought to make such movements as will render him, for practical purposes of comparison, anything more than an inert mass.

In conclusion, let me say that practical information is far superior to theorizing, yet there is such a thing as carrying pragmatism too far. The fact that the human body has great resisting power, does not warrant us in refusing to employ inductive reasoning, or properly limited analogies. Medical history has no darker pages than those recording the work of men who sneered at theories, disregarded general principles of humanity and therapeutic caution, and devoted their energies to amassing statistics.

A. L. BENEDICT, M.D.

BUFFALO, N. Y.,
June 27, 1896.

CARE IN HANDLING INFANTS.

To the Editor of THE MEDICAL NEWS:

DEAR SIR:—In THE MEDICAL NEWS of June 13th I read the "Practical Inferences from Clinical Observations in Lateral Curvature of the Spine," by A. B. Judson, M.D. I am much interested in Dr. Judson's practical writings; but the subject named affords me a text to announce my belief in one primitive cause of the "bending of the twig." Nurses and mothers, in many instances, when dressing and undressing or when bathing infants, handle them as if they could take care of their own heads, when in fact the untrained and undeveloped muscles have not the practice nor the power to support the head; consequently the head drops in whatever direction gravitation carries it when the child is held in a sitting posture. Muscles may thus be strained and retarded in their development so as not to overtake their mates on the opposite side. The head and shoulders of an infant should always rest horizontally on

the pillow or lap of the nurse, and its pelvis raised by grasping the feet while the clothing is removed and replaced over the feet instead of over the head. A child is no more able to support its head and trunk by muscular power than it is to stand or walk when it is born. Instrumental delivery may sometimes be a first cause. Whether the right-handed work of the schoolroom and the carrying of books is a more frequent cause than the carelessness of nurses, I am not prepared to answer.

N. W. LEIGHTON, M.D.

BROOKLYN,
June 22, 1896.

SOCIETY PROCEEDINGS.

THE AMERICAN SURGICAL ASSOCIATION, ANNUAL MEETING HELD AT DETROIT, MICHIGAN, MAY 26, 27, AND 28, 1896.

FIRST DAY.

The President of the Association, LOUIS MCLANE TIFFANY, M.D., of Baltimore, called the meeting to order, and read an address entitled

THE OPERATIVE TREATMENT OF TRIFACIAL NEURALGIA,

in which he stated that forty-five operators had participated in the hundred cases reported, of which number twenty-four had each operated upon one case only. He also mentioned that there was diminished sensation in these cases, and lessened lachrymation. He considered the curving of the tongue due to atrophy of the muscles, but did not understand why the perception of heat and cold should be interfered with. As to tying the carotids. Dr. Park of Buffalo had successfully done this in two cases.

DR. S. J. MIXTER of Boston, read a short paper in discussion of this subject, which was then thrown open for general discussion.

DR. W. W. KEEN of Philadelphia, was very much disappointed to learn that the mortality of operations for the relief of trifacial neuralgia was ten per cent. He had two deaths out of nine cases, one of which was due to sepsis and was avoidable. He explained the high mortality as being due, in his opinion, to the fact that the operations had been done by so many different operators, and thought that special operations should be reserved for those who have had some special training. In three of the nine cases mentioned, trouble was experienced with the cornea, but in no case was the eye lost. The following is Dr. Keen's method of dealing with corneal ulcer: Sew the lids together at the margin so as to prevent the opening of the eye, or take a circular piece of rubber plaster, cut out a circular hole in the center a little smaller than a watch glass, insert the watch glass in the hole thus made, and place this shield over the eye, the non-adhesive surface being next to the patient's eye. Although the rubber plaster does not absolutely occlude the whole space, yet the inside of the watch glass is always moist.

DR. J. EWING MEARS of Philadelphia, asked whether the President was clear in his own mind that the lesion exists in the Gasserian ganglion. If his experience with the operation upon the Gasserian ganglion demonstrates that the relief from pain is permanent, Dr. Mears felt that the real lesion had been discovered.

DR. GEORGE RYERSON FOWLER of Brooklyn, stated that in one of his cases there was a recurrence of pain, although he was absolutely certain that he had removed the ganglion. The necropsy showed the existence of a neuroma upon the stump in that portion which occupied the foramen rotundum. He fully agreed with Dr. Keen as to the necessity of keeping the eye protected, and mentioned an illustrative case. Concerning the sclerotic changes in the vessels, it may be that these are at the root of the pathology of these cases. Dr. Fowler referred to a case operated upon by Dr. Morton of Philadelphia, in which Meckel's ganglion was positively removed, and the pain returned with all its former violence in less than two years, when ligation of the common carotid gave the man permanent relief. The author mentioned other cases in which ligation of the carotid had produced excellent results, and in one of which there was a deviation of the tongue toward the side operated upon. In this case the patient was unable to straighten the tongue. He referred to one case which died during an epidemic of sepsis, and stated that he saw no reason why there should not be an epidemic of sepsis as well as of smallpox and scarlet fever.

DR. JOHN PARMENTER of Buffalo, mentioned the case of an elderly woman who had facial neuralgia, and also a small anurism of the external carotid, in whom ligation of the common carotid afforded complete recovery. He also cited a case in which he did an operation successfully on a man who had been subjected to three previous operations.

DR. H. S. WEEKS of Portland, doubted if a surgeon was justified in resorting to intracranial operations before an extracranial had been done in view of the large mortality. His plan is to trephine through the ramus of the jaw, seize the inferior dental nerve and pull it away, as he considers this method much better than cutting.

DR. N. P. DANDRIDGE of Cincinnati, cited a case on which he had operated two and a half years ago, since which time the man had been relieved from pain, but there was marked deformity of the face on account of atrophy of the muscles. There was also a small sinus leading down to dead bone.

DR. CHRISTIAN FENGER of Chicago, preferred the extracranial operation, as he considered it less dangerous. He called attention to the fact that the mortality from ligation of the common carotid was eighteen per cent.

DR. JOSEPH RANSOHOFF of Cincinnati, did not think ten per cent. a very high mortality under all circumstances, and said if all the cases were included, it would be nearer fifty per cent. In his opinion the lesion is not located in the Gasserian ganglion, but is a central affection.

DR. ROBERT ABBE of New York, said the members should not be daunted by a mortality of ten per cent., as in the next hundred cases it would be much less. In his opinion preference should be given to an anterior opera-

tion in the first place. Now that we know what we are to steer clear of, with the improvement in asepsis and the avoidance of operating on old people, the mortality should be considerably lessened.

DR. W. W. KEEN said he had ommitted to mention two methods of medical treatment which had been of great service, one recently suggested by Dr. Dana of New York, that of giving massive doses of strychnia, and the other was suggested by Esmarch, who has spoken of the value of purgatives.

DR. MAURICE H. RICHARDSON of Boston, believed that attacking the ganglion should be done as a last resort, especially in old people, and those who were unable to stand so formidable an operation as intracranial neurectomy. In many cases a simple operation would give considerable relief.

DR. FOWLER explained that the mortality of eighteen per cent. in ligations of the carotids, included cases of anurism, gunshot wounds, etc. In fifty two cases where the vessels were not affected by disease, nor complicated by carcinomatous tumors, the mortality was less than five per cent.

DR. P. S. CONNER of Cincinnati, said the two most important points were the cause of the neuralgia and the results of operative interference. In a certain proportion of cases the exemption from pain ranged from three months to three years, while in another proportion the exemption was scarcely worth mentioning, as the pain returned immediately after the operation. In some cases the loss of blood during the operation and the shock from the operation had caused periods of freedom from pain. The propriety of the operation had been established, as a man would rather take forty-nine chances out of fifty to get relief.

DR. T. A. MCGRAW of Detroit, was of the opinion that sufficient investigation had not been made of the possibility of the neuralgic conditions being due as well to motor as to sensory nerves, and stated that he was not at all sure that a division of some of the motor nerves might not be a great benefit.

DR. RICHARDSON stated that this operation had been performed and resulted in considerable facial deformity, but no relief of the neuralgia.

DR. MIXTER mentioned two cases in which merely reopening the old intracranial wound had afforded some relief.

The afternoon session was wholly given up to a consideration of

THE SURGICAL TREATMENT OF TUBERCULOSIS OF THE SOFT PARTS.

The first paper on

TUBERCULOSIS OF THE MALE GENITO-URINARY APPARATUS,

by NICHOLAS SENN, M.D., of Chicago, was read by title.

ALBERT VANDER VEER, M.D., of Albany, presented a paper upon

TUBERCULOSIS OF THE FEMALE GENITAL ORGANS (INCLUDING TUBERCULOSIS OF THE KIDNEY).

He stated that this subject had been neglected until recent years, and that the modern ideas and progress depended upon careful histological and bacteriological examinations. Tuberculosis of the female pelvic viscera was not limited to any age, the extreme limits being ten weeks and eighty-three years. External genital lesions might be confounded with tuberculosis. Heredity was important as suggesting tubercular possibilities. Tuberculosis was extremely rare in the external genitals, but by no means infrequent in the uterus. Tuberculosis of the uterus could be demonstrated by microscopic examination of the discharges and by curetting. Gonorrheal infection was often grafted upon tuberculosis. Sometimes infection took place through the fingers or the instruments or the semen. Tuberculosis originated in the tubes and infected the uterus and cervix. The uterus could be infected from without or within, and the infection was aided by a lacerated cervix, pelvic peritonitis, trauma, etc. The symptoms were local irritation, a pea-sized wart near the vaginal outlet, a discharge from the uterus, etc. The differentiation between the ulcers of syphilis and epithelioma depended on age, history, local appearances, etc. Tuberculosis of the cervix might be mistaken for cancer. Many vaginal cases were infected from the tubes, and tubercular peritonitis might infect the vagina and tubes. The author mentioned several cases illustrative of the points mentioned.

With regard to tuberculosis of the kidney, there were two forms: (1) miliary tuberculosis, and (2) caseous or true tuberculosis. The author gave the details of one or two cases and referred at some length to Kelly's nephroureterectomy.

ROBERT ABBE, M.D., of New York, read a paper upon

TUBERCULAR PERITONITIS.

In reviewing this interesting subject, Dr. Abbe thought it gave a fairer understanding of the multiform appearances of the disease if we viewed it from the standpoint of the bacillus, rather than as others have done from the gross appearance, which had led to the division into the ascitic, the dry and the caseating forms. A sudden tubercular eruption into the peritoneal cavity may be as acute in symptoms and durations as peritonitis from other causes. A slower outbreak may result in ascitic distention in three or four weeks, and a less virulent bacillus may occupy months in inducing ascites and wasting. In other cases, possibly due to the route of invasion (penetration through lymphatics communicating mucous and peritoneal serous coats or by follicular ulcers—admitting tuberculous milk to be the median of infection), a dry or adhesive form follows in which hectic and rapid wasting result. Again, the bacillus produces an outpouring of thick lymph and flocculent serum, which rapidly becomes purulent, producing unsymmetrical cakes of thickened omentum, matted coils and encapsulated purulent collections. The bacillus product rapidly caseates and ulcerating fistulæ may result. All phases of the disease may be regarded as representing the life history of the bacillus and its products. Tubercular peritonitis may be, and in the early stages often is, the only site of tubercle deposit in the patient, hence, if overcome here a practical cure often follows. Even when other phases of infection

(pleural, intestinal, bronchial) are seen, an operative cure of the peritonitis has often been followed by general recovery. The mode of entrance of the bacillus is directly through the intestinal wall or through ulcerating appendicitis or tubal or ovarian tuberculosis, or through the blood. The claims of a few recent authors to having cured tubercular peritonitis by medical treatment were reviewed and credited. The unquestioned cure of true tubercular peritonitis by laparotomy was proved by two classes of cases, those who have long survived operation, and those who have come to autopsy long afterward, have been found free from tubercles that studded the peritoneum at the time of operation. Experimental proof in animals corroborates, also operation by simple laparotomy and evacuation of the ascites. Closing the dry abdomen is credited with a large number of cures. Irrigation with warm salt solution is advocated by preference. Camphor-naphthol application, as used by Rendu, is advised for bad cases. Dr. Abbe reviewed many interesting and illustrative cases in speaking of direct medication. The many theories advanced to account for the surprising cures were carefully considered, and it was said in conclusion that the theory that is sustained by most facts was that based on the life-history of the bacillus and the capacity of the animal economy, not only to suppress the activity of the organism by encapsulating it, but to remove it by absorption. The proper opportunity for conquests is not afforded in the presence of ascitic fluid, which acts as a veritable culture bouillon, and by its fluidity aids dissemination. When, however, the peritoneum has been aroused by congestion, which follows evacuation, and a reactionary inflammation is set up, engendering cell hyperplasia, the intruder is walled in and retrograde degeneration will begin.

GEO. RYERSON FOWLER, M.D., of Brooklyn, continued the general subject by a paper on

INTRATHORACIC TUBERCULOSIS.

He went into the historical part of the disease at great length, and devoted considerable attention to the surgical treatment of pleuritis and empyema. Of all the organs in the human body the lungs are most frequently the seat of these affections. Inasmuch as there is no lung affection that cannot be complicated by tuberculosis, it follows that pleural affections are most frequently tuberculous in character. Few patients who have suffered from pleurisy escape tuberculosis, and this fact increases the importance of the surgery of pleuritic affections in their relation to tuberculosis. The author gave a brief discussion of the effects of the presence of the pleuritic effusion upon the progress of tubercular disease of the pulmonary structure. The view formerly held that the activity of the circulation in the lung tissue constituted a trustworthy means of protection against the occurrence of tubercular infection of the respiratory organs was combated, and reference was made to the observations of Laennec, who, in the early history, stated that stasis was incompatible with the progress of pulmonary tubercular affections, and Bier's observations, supported by those of Miller, in the treatment of tubercular joint disease by means of a constricting bandage was held to confirm the views of Laennec in this particular. Note was taken of the fact that in any pleuritic affection, even when due without doubt to tubercular affection, the effusion is found to be serum, the suggestion follows that this effusion possesses some resisting influence over the development of the tubercle bacillus, while it undoubtedly forms a favorable culture medium for other organisms. The application and technic of exploratory puncture or thoracentesis, incision, and drainage, and Koenig's operation, the resection of a portion of rib, were gone into quite extensively. This was followed by a consideration of the operation of thoracoplasty and its indication. Schede's operation for extensive resection of the chest-wall, including with the bony resection removal of the attached soft parts, namely, the intercostal muscles and thickened pleural membrane, was described. It was recommended that the edges of the incision should be approximated closely about the drainage-tube and the dressing should be applied in such a manner that the tube passes through these. The drainage-tube is then attached to a tube sufficiently long to lay over the side of the bed and touch the surface of a sublimate solution. When the patient can sit up the tube is fastened to a bottle at the waist, as suggested by Bulau of Hamburg. By this method of drainage the patient is saved from the discomfort produced by soiled dressings. The question of complications occurring in connection with thorocoplastic operations upon the chest-wall, namely, pulmonary thrombosis, cerebral embolism, and the resulting paralysis, was alluded to. The concensus of opinion at the present day was thought to discountenance thoracotomy in tubercular patients, preference being given to repeated puncturing or at the most the method of permanent siphonage.

The question of the direct treatment of tubercular cavities was entered into quite extensively, and it was stated that some difficulty must necessarily be experienced in the selection of proper cases. In cases in which the disease had come to a standstill, any interference would be unjustifiable, for the reason that it is these cases that undergo cure by natural processes. In addition to limiting operations on tubercular cases to those that are circumscribed, the operation may be applied to certain cases of a doubtful nature, which form at the expense of both pleura and lung, namely, pulmonary abscesses secondary to tubercular caries of the ribs. Three examples of this were quoted. The operation of resection of the lung was discussed at some length, and attention was called to the fact that the pulmonary structure differs from all other structures in the body in its susceptibility to infection and its anatomical peculiarities. The experiments of Glück of Berlin, and Hans Schmidt, upon the lower animals for resection of the lung were detailed, as also those of Virondi, who produced localized tuberculosis in the lower animals.

DEFOREST WILLARD, M.D., of Philadelphia, read the next paper, entitled

TUBERCULOSIS OF THE SUPERFICIAL GLANDS.

He first detailed the method of tubercular infection of the lymph nodes. The route of entrance is usually by very slight abrasions or injury. Slight wounds are more liable to admit bacilli, as they arouse local resistance to a

less degree than more severe injuries. The face and neck are especially common routes of entrance. The lymph glands act as filtration stations, and often prove effective in overpowering the invading foe. They are liable to be successful in proportion to their amount of resistive force. An individual's resistive force may be lessened by hereditary impairment of cells, or by the condition of the tissues.

Local karyokinetic action may be successful, or if partially successful caseation and absorption may occur with less resistive power, or if staphylococcus infection results, suppuration follows. When once the glands have become infected, they are a perpetual menace to the general system, and should be removed. Suppuration will sometimes effectually destroy all the invading bacilli, yet this is a slow and dangerous process, subjecting the individual to constant risks.

Infected glands should be removed, if possible, during the stage of induration.

The removal of tubercular glands from the neck is frequently a most serious operation, provided connective infiltration is present, and especially if the chain of glands has dipped deep beneath the cervical vessels and nerves or has extended below the clavicle. These deep glands can only be safely removed by following the line of cleavage between the gland and the protection wall, which has been partially thrown about it, each gland being cautiously shelled out.

The jugular veins, the branches of the carotids, and the pneumogastric and phrenic nerves should be carefully avoided. When a vein is injured, immediate pressure, with subsequent ligation or lateral suturing, should be performed. If the phrenic or pneumogastric are injured, they should be at once sutured with fine silk.

Great care should be exercised to prevent the discharge of pus and caseating material upon the fresh wound; if such accident occurs, the area should be thoroughly cleansed and disinfected. Temporary drainage is advisable when infection has occurred from such discharge, but in healthy operations, with clean enucleation, primary union without drainage can be secured.

In infection in the axilla, the glands should be enucleated with the same care that is employed in the removal of carcinomatous nodule. The same rule holds good in regard to glands situated in other portions of the arm. In the groin, many difficulties will be encountered, especially if the indurated glands extend deep about the femoral or saphenous veins. Secondary operations are advisable, if necessary. In cases that absolutely refuse operation, local and constitutional measures must be employed, including tuberculin and serotherapy. The author has more confidence in the local effects of iodin upon tubercular granulations than in iodoform. He has also had beneficial results from stimulation of cell growth by a mixture of aristol with nuclein or protonuclein, applied locally. Tubercularly infected glands should not be allowed to remain and contaminate the general system.

Short papers on this discussion were read by DRS. J. MCFADDEN GASTON of Atlanta, CHAS. B. NANCREDE of Ann Arbor, J. R. WEIST of Richmond, Ind., and GEO. W. GAY of Boston.

SECOND DAY.

ALBERT T. CABOT, M.D., of Boston, opened the proceedings of the day by reading his paper upon

DOES ADDITIONAL EXPERIENCE SHOW THAT CASTRATION IS A CURATIVE REMEDY IN THE TREATMENT OF HYPERTROPHY OF THE PROSTATE GLAND?

He drew the following conclusions:

1. In the matter of mortality, the operation of prostatectomy has a slight advantage over castration. It seems probable that with later statistics, reflecting the last improvements in the technic of prostatectomy, this advantage would be further increased.

2. Prostatectomy had the further advantage that it allows of a thorough examination of the bladder and of the discovery and correction of other conditions not before suspected. Stones are frequently removed in this way without adding to the gravity of the operation. In several reported cases of castration, the absence of improvement has led to subsequent discovery of stones, which have required other operations for their removal.

3. Prostatectomy has, on the other hand, the disadvantages that it confines the patient for a longer time, and that it is sometimes followed by a fistula. This occurred in one of the forty-two cases cited in this paper.

4. It is too early to know whether any permanent loss of vigor follows castration when done on old men. The nervous effects which sometimes immediately follow the operation suggest a suspicion that with the testes the system may lose some tonic effect exerted by those organs.

5. The functional results of the two operations seem at present to be as nearly equal as possible, and the tendency to relapse shows itself in about the same proportion of cases after either operation.

6. The reduction in the size of prostate after castration is largely due to a diminution of congestion. Later a degeneration and absorption of considerable portions of the gland may occur. The glandular elements are particularly affected by this atrophy.

7. Castration would seem to be especially efficacious in cases of large tense prostates when the obstruction is due to pressure of the lateral lobes upon the urethra.

8. Castration is of but little use in myomatous and fibrous prostates.

9. Prostatectomy has its especial field in the treatment of obstructing projections which act in a valvular way to close the urethra. There is, however, no form of prostatic obstruction which a skilful operator may not correct by prostatectomy.

10. Prostatectomy is then applicable to more cases than castration and is especially to be selected when an inflamed condition of the bladder makes drainage desirable.

DR. J. EWING MEARS of Philadelphia, was very much struck with the mortality shown from the different operations. He was sorry to learn that no one had any information to offer concerning an operation suggested by himself as a substitute for castration, namely, ligature of the vas deferens.

DR. CHAS. B. NANCREDE of Ann Arbor, said that as

a result of his work with the operation of castration, he had been converted from a rather doubtful attitude toward the operation to a desire and willingness to do it again. He gave at some length the details of the case operated on by himself, which did very well after the operation, but the patient died in five or six weeks from an infection of his wound.

DR. L. S. PILCHER of Brooklyn, said that from the statistics mentioned in Dr. Cabot's paper, it would seem that prostatectomy had a slight advantage over castration, not only in its results but also by affording opportunity to secure relief from other urinary complications at the time of operation. In his own hands, however, all prostatectomy operations had been failures, but if the opinions of other surgeons could be ascertained, it would probably be found that a much larger proportion of fatal results really occurred than the figures mentioned by Dr. Cabot showed. The operation of prostatectomy has only been resorted to in cases of men who manifested considerable vigor, while on the other hand, castration has been performed in cases that were already extremely feeble, and could not stand a more serious operation, and frequently by surgeons who were not particularly expert in genito-urinary work.

DR. J. MCFADDEN GASTON of Atlanta, spoke of a method of treatment that had recently been brought to his notice by a gentleman whose name he would not mention, the principle of which was to endeavor to reduce the size of the prostate by the employment of prostatic extracts in a somewhat similar way to the methods now employed with the thyroid extract.

DR. ROSWELL PARK mentioned two cases of castration performed by himself in which the subsidence in the volume of the prostrate gland was remarkably rapid and complete. In his opinion there could not be a simpler or easier operation.

DR. ROBERT ABBE spoke of one case in which he had removed both testicles under cocain, with the result that the prostate was reduced more than one-half its size. He compared the operation of castration to that of removal of the ovaries.

DR. CABOT said the most important question was not the ability of the operator, but the selection of the proper cases for the operation of castration. If a proper selection was made, he believed the mortality would be greatly reduced.

LOUIS S. PILCHER, M.D., of Brooklyn, read the next paper upon

THE AMBULATORY TREATMENT OF FRACTURES OF THE LOWER EXTREMITIES.

DR. PILCHER mentioned a large number of cases of fracture in which the ambulatory treatment had been employed, and illustrated his paper with diagram of the apparatus employed. He described in detail the manner of applying the plaster bandage so as to form a sufficiently rigid and protective case, and also explained the splints used in this method of treatment. He stated that the number of cases of fracture of the leg treated by himself up to the present time with the ambulatory dressing was twenty and the results that have followed this treatment in these cases have been very satisfactory.

DR. JOHN E. OWENS of Chicago, stated that cases of fracture of the lower extremity treated by this method might be divided into two classes, first, those that walk with the aid of crutches, but bear little or no weight upon the affected limb, and second, those that walk on the affected leg with or without the aid of cane or crutch. After describing at some length his method of applying the dressing, demonstrating the apparatus in position and referring to cases in which he had used it, he concluded: (1) That the main object in the treatment is to enable the patient in a few days to get up and walk about on the fractured leg. (2) That union is accelerated in many cases; comfort, appetite, digestion, and sleep secured; swelling, muscular atrophy, pneumonia and delirium tremens prevented and flexion and extension maintained. (3) That in the application of the dressing the foot is maintained at a right angle to the leg, and extension maintained until the deformity is corrected and the legs are of even length. (4) That the material usually employed is plaster-of-Paris in which wooden or metal strips may be included, there being a very thick plaster sole, separated from the foot by a layer of cotton about five centimeters thick, the plaster being carefully molded with the hand, so as to fit snugly against the upper end of the tibia and about the dorsum and ankle. (5) It is generally thought best not to apply the dressing until the second or third day after the accident. (6) The patient must remain under observation in order that any displacement, undue constriction, or other defect may be noted. (7) In fractures of the thigh a combination of plaster-of-Paris and glue is recommended by some, while others have used special splints. (8) The plaster may be made to include the pelvis. (9) The dressing may be applied to the leg, and then allowed to harden after which the patient's hips are raised from the bed, extension being made to correct displacement and the remainder of the dressing applied. (10) An important feature of the dressing is its strong reinforcement and close application at the upper and back part of the thigh, thus securing a firm bearing against the ischium and perineum. (11) That the sooner the immobilization is affected the less will be the swelling. (12) That the method can be applied with great satisfaction, and that an exact fit must be secured.

DR. N. P. DANDRIDGE of Cincinnati, briefly discussed this paper.

DR. CABOT said that in two cases the use of Dr. Pilcher's apparatus had been a benefit in his hands.

DRS. SENN, WILLARD, FENGER, MEARS, NANCREDE, and GAY, did not agree with the methods of treatment suggested by Drs. Pilcher and Owens.

DR. H. H. MUDD of St. Louis, thought the apparatus might work very well in certain cases.

DR. MOORE stated that he had had good results from the employment of this method of treatment in two cases.

W. W. KEEN, M.D., of Philadelphia, read a paper on

THE TREATMENT OF TRAUMATIC LESIONS OF THE KIDNEY.

After reading a tabulated list of 163 published cases of renal traumatism since 1878, the author stated that traumatic lesions have, as a rule, two advantages over the

other renal affections: (1) being apt to be unilateral, the other kidney is not injured; and (2) the injured kidney is apt to be healthy or fairly so. Gunshot wounds, on the contrary, have two disadvantages; (1) that the treatment of the kidney alone, in many cases, cannot be solely considered; and (2) if the renal substance is only moderately injured, no one would be willing to do primary nephrectomy.

As to the treatment of gunshot wounds, they may be divided into; (1) those involving only the renal substance; (2) those involving the pelvis; (3) those involving the vessels, and (4) those involving the ureter. The incision in most cases should be abdominal, either median or at the outer border of the rectus, and if the vessels are badly torn so that there has not only been a great deal of hemorrhage, but the integrity of the organ is threatened, nephrectomy should be performed.

In treating the exravasated blood in case the kidney is not removed, if the bleeding is into the peritoneal cavity, the blood must be removed by abdominal section, but if it accumulates in the perinephritic tissues alone, it may be left undisturbed.

In treating the kidney, if the wound is sufficiently large for it to prolapse, it should be sutured and replaced if its condition is suitable, and the same procedure may be carried out if the pelvis of the kidney is opened. A partial nephrectomy would be advisable if a portion of the kidney is so far severed that its future integrity is threatened, and the fragment removed.

As the dangers of rupture of the kidney are primary and secondary, the treatment may be conveniently so divided. Usually it must be decided if a nephrectomy shall be done within the first few days or even hours, but it may occasionally be postponed and become a secondary operation, while the lumbar route will be best.

Of 116 cases of rupture of the kidney reported, 66 recovered. Secondary nephrectomy is nearly twice as fatal as primary.

ROSWELL PARK, M.D., of Buffalo, presented a paper upon

ON SUSCEPTIBILITY AND IMMUNITY, WITH SPECIAL REFERENCE TO SURGICAL CASES. (To appear in an early issue of the MEDICAL NEWS.)

DUDLEY P. ALLEN, M.D., of Cleveland, presented a paper entitled

THE EFFECT OF ANESTHESIA UPON THE TEMPERATURE.

Dr. Allen dwelt very fully on the results obtained from a large number of experiments, principally upon dogs, and gave the details of each observation.

DRS. GAY, PARK, HARTE, FENGER, WILLARD, ABBE, MCGRAW, and NANCREDE heartily endorsed Dr. Allen's methods and views.

Dr. Park, representing the Committee on the Nomenclature of Tumors, presented a printed report showing the method suggested by the Committee of Classifying Tumors.

DR. J. MCFADDEN GASTON of Atlanta, demonstrated upon the cadaver, an improved method of exploring the thoracic cavity.

DR. S. H. WEEKS presented his report as a delegate to the British Medical Association in 1895.

CHRISTIAN FENGER, M.D., of Chicago, read a paper on

RETENTION FROM BENDING AND VALVE FORMATION (OBLIQUE INSERTION) IN THE BILIARY TRACT.

He demonstrated, by morbid specimens and diagrams, his method of treating this affection.

JOSEPH RANSOHOFF, M.D., of Chicago, read a paper entitled

AN UNUSUALLY LARGE PERIOSTEAL SARCOMA OF THE THIGH SUCCESSFULLY TREATED BY EXTIRPATION.

This paper was discussed by Drs. Dandridge and Gaston, who mentioned cases somewhat similar to that of Dr. Ransohoff.

DR. J. COLLINS WARREN of Boston, was elected president for the ensuing year, and Washington was selected as the place for meeting in 1897.

REVIEW.

A HANDBOOK OF MEDICAL DIAGNOSIS FOR STUDENTS. By JAMES B. HERRICK, A.B., M.D., Adjunct Professor of Medicine, Rush Medical College; Professor of Medicine, Northwestern University Woman's Medical School, etc. With 80 illustrations and 2 colored plates. Philadelphia: Lea Brothers & Co., 1895.

STANDARD manuals of diagnosis are not quite so numerous as books on many other subjects in medicine, hence the appearance of a new one arouses considerable interest. The one before us is somewhat smaller than the work of DaCosta and Musser, but much larger than the usually unsatisfactory books belonging to the class of compends. Following in its classification the plan of the newer works on the practice of medicine, it takes up, in a very thorough manner, the symptoms and differential diagnosis—the latter, where possible, in tabular form—of the entire list of diseases to be found in the most recent works. The various chemical tests introduced into clinical studies are given, and we would especially commend the section on urinary analysis. Perhaps a few words on the pentoses might have been added to the chapter. On page 299 we find a slight error to be corrected in a future edition—exogenic-torticosis should be exogenic toxicosis. The chapter on diseases of the blood is very good, and the most approved methods of staining are given. Diseases of the nervous system receive thorough treatment, and the text is helped by a number of well-chosen illustrations. The book will, we believe, hold in the English language the same rank that is occupied by Klemperer's excellent work in Germany.

CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JUNE 13, 1896.

June 6th.—Passed Assistant Surgeon P. H. BRYANT, ordered to Naval Station, Newport, R. I.

Assistant Surgeon C. M. DEVALIN, detached from the Chelsea (Mass.) Hospital and ordered to the "Blake."

June 13th.—Passed Assistant Surgeon E. R. STITT, detached from the "Blake" and ordered to the "Vermont" June 15th.